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PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

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FIFTY-FIRST YEAR

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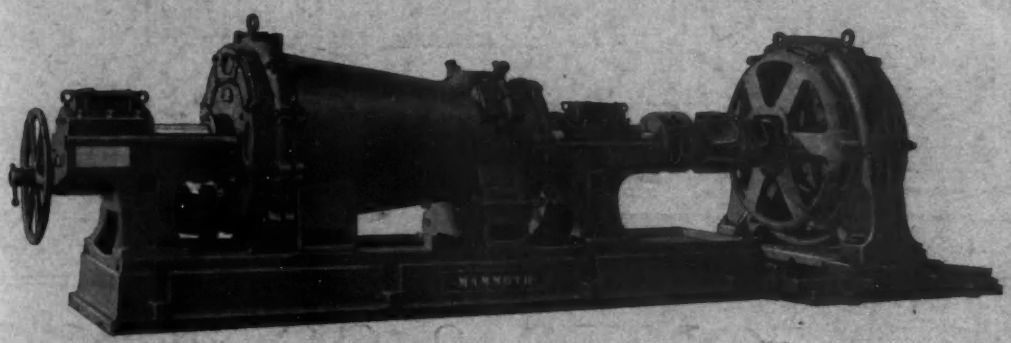

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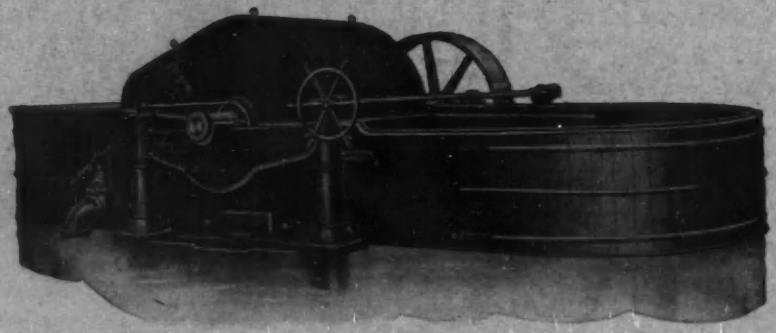

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Manufacturers of

Paper Making Machinery

ESTABLISHED IN 1872

PAPER TRADE JOURNAL

The International Weekly of the Paper and Pulp Industry and the Pioneer Publication in its field

FIFTY-FIRST YEAR

Published Every Thursday by the

LOCKWOOD TRADE JOURNAL COMPANY, Inc.

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WESTERN BOARD DIVISION OF SUPERINTENDENTS MEETS

Third Gathering at the Congress Hotel, Chicago, Saturday, May 12, Is Well Attended and Is a Big Success in Every Respect—Claude E. Nicely, Chairman of the Division Presides—Representative Men of the Industry Present Interesting Papers—Plans Will Probably Be Made for a Joint Meeting With the Michigan Division Early in the Fall—Banquet Is Specially Enjoyable Affair.

CHICAGO, May 14, 1923.—The third meeting of the Western Board Division of the American Paper and Pulp Mill Superintendents' Association was held at the Congress Hotel, Chicago, on Saturday, May 12. Two points of operation, namely, "The Use of Colors" and "The Drying of Paper," were the topics slated for special consideration. Authoritative speakers presented the subjects and members present showed their interest in these vital problems by asking pertinent questions and taking part in the general discussions which carried the meeting late into the afternoon. Time was forgotten and it was past five o'clock before the closing business session adjourned to give the superintendents an opportunity to prepare for the banquet which was served at seven o'clock.

To Meet with Michigan Division

Before leaving for their homes, members of the Western Board Division voiced their sentiments in favor of a joint meeting with the Michigan Division early this fall.

The morning session was devoted to an informal discussion of conditions in the trade, experience of the various superintendents in handling a number of the problems that present themselves in the course of paper making. This meeting was completely informal, with everyone taking part under the leadership of Chairman Claude E. Nicely and Secretary-Treasurer Daniel J. Gallery. Much interest was manifested in the manufacture of strawboard, as explained by T. L. Peterson, third vice-president of the division and affiliated with the Mount Vernon Strawboard Company, Mount Vernon, Ind.

Luncheon

Luncheon was served at the noon hour in the Francis I room, where all sat down to a round table. At this time, questions were asked as to the reasons why certain members had failed to put in their appearance. This led to a general discussion as to the best method of securing the attendance at future meetings of superintendents who have not had first-hand knowledge of the benefits to be derived. Consensus of opinion seemed to favor the writing of personal letters by the present membership to their friends in the territory covered by the Division.

Afternoon Session

The afternoon session was called to order at two o'clock by Secretary-Treasurer Gallery, who demonstrated his possession of those qualities that make a successful presiding officer by the manner in which he introduced the speakers and kept discussions going by interjecting questions pertinent to the subject under discussion.

Chairman Nicely called attention to the forthcoming national convention of the American Pulp and Paper Mill Superintendents' Association, to be held at Springfield, Mass., on May 31, June 1 and 2, and urged as many of the superintendents as could get away to attend the meeting. He told of the contemplated visit to the paper mills at Holyoke and of the promised entertaining features.

Mr. Nicely spoke of his attendance at the recent New York meeting and show and referred to the fact that he had met a number of the executives of paper mills, who expressed themselves as pleased with the work of the superintendents through their various division associations. He complimented the members on the education programs of their meetings and emphasized the fact that if bona fide superintendents really knew how much they would be aided by attending meetings, none of them would miss a single one. He was enthusiastic about the possible joint meeting with superintendents in the Kalamazoo district and said everything would be done to urge the Michigan division to arrange a joint meeting to be held some Saturday in September.

Use of Colors

Kenneth T. King, of E. I. du Pont de Nemours & Co., gave an interesting talk on the "Use of Colors in Paper Making." He gave his audience a brief historical account of the manufacture and use of dyestuffs. He divided dyestuffs and colors into three groups, namely, acid, basic and lake, and referred to direct colors and sulphur colors. He said that the first question to be considered concerned the necessity of making the board fast to light. He compared calendar coloring with beater coloring, called attention to the economy of one and the effectiveness of the other. By directing the attention of the superintendents to the anticipated uses of the board that is being manufactured, Mr. King emphasized the point that the durability of the colors was dependent upon that use, illustrating his statements by referring to the requirements of cartons, soup box stock and other containers in general use. Many questions were asked of Mr. King and many experiences of those present were related for the benefit of other members. With reference to foreign markets, Mr. King stated that since the first of the year American plants have become exporters, taking a considerable amount of Chinese business that the Germans have been unable to fill.

Drying of Paper

John O. Woodsome, of John O. Woodsome & Co., pulp and paper mill engineers, with headquarters at 407 South Talman avenue, Chicago, gave a most interesting talk on the drying of paper, going into some of the perplexing situations which were quickly recognized by the superintendents. Mr. Woodsome dwelt on the advisability of drying by graduation, starting with the lowest temperature at the wet end and continuing to the highest at the dry end. The question of superheated steam was also thoroughly presented.

"In the drying of paper," said Mr. Woodsome, "it is necessary properly to limit or control the maximum temperature of the paper, and also to effect a gradually increasing temperature of the paper as it passes over the dryers. To accomplish this, the wet end of the machine should deliver considerable heat to the paper, but at a comparatively low temperature in order to avoid searing the paper, for when seared, moisture is sealed or trapped in the sheet. This results in uneven drying, cockles in the paper and a need for both excessive temperature and a greater quantity of steam in subsequent dryers to remove such moisture."

Recommends Faster Running of Paper

He recommended principles of drying that permit paper to be run through the machine much faster than is generally possible and referred to one mill where a speed of 1,100 feet per minute has been attained. By this ideal system, he stated that the quality is also improved, due to the automatically maintained graduations of temperatures, which allow a correctly proportioned application of heat. "A better quality of paper results from the uniform distribution of moisture and the desired percentage of moisture content is under the direct control of the machine operator," said Mr. Woodsome. With this process, he claimed that mottling is absent in colored papers and colors are not bleached or faded by high temperatures.

He presented a system whereby air and non-condensable gases are taken care of by overcoming cool and inefficient heating surface on all dryers by the circulation of steam at higher velocities than were heretofore possible. These higher velocities, made possible

by the use of ejectors located on the return pipe of each dryer, effectually prevent the accumulation of air or non-condensable gases in the dryer.

An intensely interesting discussion followed Mr. Woodsome's remarks.

Vapor Absorption in Paper Drying

Vapor absorption in the drying of paper which increases the production by 15 per cent was briefly discussed by J. L. Williamson, of the J. O. Ross Engineering Corporation, at the request of the presiding officer.

The Banquet

One of the features of the meetings of the Western Board Division is the banquet held after all business has been transacted and all business talks have been thoroughly discussed. These banquets have been, in the past, all that could be desired. At this particular feast, however, the chicken seemed to have a better flavor, the entertainment was of the right, high-class calibre and the community singing of the banqueters was more enthusiastic. Every man present had caught the spirit of true association work and felt that the day spent in Chicago was extremely educational and highly beneficial to them in their work.

New Director of Bureau of Standards

Dr. Geo. K. Burgess has been selected to succeed Dr. S. W. Stratton as director of the United States Bureau of Standards. For the past ten years Dr. Burgess has been chief of the Bureau's Division of Metallurgy. He has spent the last twenty years, however, in continuous service with the bureau.

It is recognized that his familiarity with the bureau's work constitutes a very important asset, and there are many who think that there is no physicist in the country better qualified to direct the affairs of the bureau than is Dr. Burgess.

Oxford Paper Co. Makes Improvements

[FROM OUR REGULAR CORRESPONDENT.]

RUMFORD FALLS, Me., May 14, 1923.—The Oxford Paper Company has just started additions and improvements to its book and coated paper mill here that will cost $750,000 and will be completed by next November. It will make the total capacity of the company 350 tons of book paper per day. A new 162-inch Fourdrinier machine, ordered from Rice, Barton & Fales, of Worcester, Mass., will add 40 tons daily to the production. An extension is being made to the present machine and beater room to accommodate this machine and new beaters and to provide for future expansion. This building will be 216 by 75 feet, of brick, steel and stone construction.

The bleach plant will be enlarged by an addition of 216 feet frontage, and 50 feet depth, to take care of the new 48 cell unit, which will give an increased production of 1,900 tons of electrolytic bleach and 75 tons of caustic powder.

There is also under construction a pulpwood conveyor to handle wood pulp from the various piles within the mill yard, direct to the wood room, thus eliminating loading into cars for switch movement and unloading at wood room. This conveyor will consist of wooden trestle work about a mile long equipped with a traveling chain.

John Moles Resigns from American Writing

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., May 14, 1923.—The resignation of John Moles, chief engineer for the American Writing Paper Company, was announced by President S. L. Willson, of the company, today. Mr. Moles will be succeeded for the present by Harman Harrigan, production engineer. L. S. Nold has been added to the auditing department with his title as yet undetermined.

Insurance for I. P. Co. Employees

The International Paper Company has made arrangements with the Metropolitan Life Insurance Company, of New York, whereby each of its active employees who have been in its continuous employ for a period of six months may be provided with life insurance, protection against permanent and total disability, weekly benefits in case of sickness or non-occupational accident, and a special indemnity for accidental death or dismemberment.

This plan will cover employees of the International Paper Company and all subsidiary companies owned entirely by the company. All employees who have been in the service continually for six months or over, and who are actively at work on the effective date of the insurance, are eligible for the insurance benefits. Other employees will become automatically eligible upon completion of six months' service. Employees absent on account of sickness when the insurance goes into effect will be eligible as soon as they return to active duty.

The company says: "We want this to be our employees' insurance plan, and we believe that they would prefer to share in the cost, rather than to have it wholly a gift from the company. We have, therefore, decided to offer this plan to our employees at a weekly cost shown, the remainder of the cost to be borne by the company.

"Having in mind the best interest of all concerned, we have decided to make three groups of employees according to the amount of annual earnings and to grade proportionately the amounts of the various benefits and the amount of your contribution."

The plan provides the following:

1.—Life Insurance—Death Benefit at $1,000, $2,000 and $3,000.

2.—Permanent and Total Disability at $51.04 per month for 20 months, $52.50 per month for 40 months and $54.00 per month for 60 months.

3.—Accidental Death Insurance at $1,000, $2,000 and $3,000.

4.—Accidental Dismemberment Insurance at $1,000, $2,000 and $3,000.

5.—Accidental Dismemberment Insurance at $500, $1,000 and $1,500.

6.—Weekly Sick and Non-occupational Accident Benefits $10.00, $15.00 and $20.00.

Weekly cost of all above insurance to each employee, $.25, $.50 and $.75.

New Production Men for American Writing

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., May 16, 1923.—President S. L. Willson of the American Writing Paper Company announces the appointment of two production managers to take the place of R. R. Campbell, formerly vice president and manager of production who recently resigned. Leon M. Yoerg, superintendent of the Carew Manufacturing Company, has been appointed manager of production of the fine writing mills, and William L. Nixon who has been production manager for the Chemical Paper Company will be production manager for the book or coarser paper mills of the Company.

The new appointments will not affect the positions of Arthur C. Gault, superintendent of the coarse paper mills, or of Fred H. Sturtevant, superintendent of the fine writing paper mills of the Company. Mr. Willson said speaking of the appointments that the proposition of production was so big that he felt warranted in appointing a manager to each class of production. Both men are well known in paper mill circles and they will take up their new duties as soon as they can secure release from their present employers.

Victory Bag Co. Opens Cincinnati Branch

CINCINNATI, Ohio, May 7, 1923.—The Victory Bag & Paper Company, manufacturers of "Victory" food containers has opened a branch office at 514 W. Main street, of which A. N. Butler is manager.

QUEBEC PULP AND PAPER CO. TO BUILD MILL NEAR QUEBEC

Financial and Other Details Have All Been Arranged and the Enterprise Is Said to Include Men Well Known in the Industry—Ground Wood Mill to Be Built First But Plans Provide for Expanding Plant for Manufacture of Sulphite and News Print Whenever It Is Desired—Western Quebec Paper Mills, Ltd., to Build Tissue Mill at St. Andrews—New Mill For New Brunswick.

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., May 14, 1923.—Premier Taschereau announced this week that a new pulp and paper mill is to be erected in Quebec city which will give employment to a large number of people. It is believed that the project he refers to is one organized by John D. Roche, of Montreal, for the establishment of a ground wood pulp mill, to be built this summer at Sillery, near the city of Quebec, by the Quebec Pulp & Paper Company, Limited, a new corporation. The plans include provisions for expanding the plant to produce sulphite pulp and news print paper whenever it is desired to make the necessary additions. The mill will be exceptionally well located in regard to shipping facilities, having both rail and water connections, and the company is also said to have made favorable arrangements for its supply of pulpwood. The financial and other details have all been arranged, and a public announcement, including the names of those concerned in the enterprise, which include some well known to the industry, will be made soon.

Paper Industry Expansion Endorsed

Premier Sir Richard Squires, of Newfoundland, who brought on a general election to consult the people on the question of subsidizing a British pulp and paper industry for the island, has been returned to power, by the same majority as in the general election of 1919. In that year the Squires party carried 23 seats in the House of Assembly to 13 for the opposition. In re-electing Premier Squires the people of Newfoundland have endorsed the plan of the Government to guarantee principal and interest of $9,000,000 for the establishing of a pulp and paper industry by the Armstrong-Whitworth Company, of London, Eng. The British Government has undertaken to guarantee a similar amount towards the enterprise. When the proposed pulp and paper mill to be constructed on the Humber River in Newfoundland has been completed that country will have a mill larger than any of its kind in Canada and one of the most up-to-date in the world. At a cost of approximately twenty millions, Armstrong & Whitworth, in conjunction with the British Government and the Government of Newfoundland, are planning the plant. For the past few weeks several of the representatives of the British company have been in Montreal on their way to Newfoundland to look over the site on the Reid Estate. When work on the mill will commence has not definitely been decided upon, but it is expected that it will be soon. It is expected that Armstrong & Whitworth will do the building themselves and look after the complete fitting of the plants, as they make all the necessary machinery. The mill, however, will be operated by power from the Humber River, and to do this, according to General Jack Stewart of the Welch Contracting Company, Vancouver, it will be necessary to build a canal ten miles long.

$400,000 Paperboard Bonds Being Offered

A public offering of a new underwriting of $400,000, 7 per cent first mortgage sinking fund bonds of the Canadian Paperboard Company, Limited, will shortly be made by Canadian Debentures Corporation, Limited. These bonds are the second half of an issue of $800,000, dated April 1, 1922, and are being issued for the purpose of completing the company's power developments and increasing warehouse capacity at Frankford and Campbellford. The company is the largest manufacturer of paperboard in Canada, and has three plants located at Montreal, Frankford and Campbellford, Ont., with a total capacity of over 30,000 tons per annum.

Paper Merger Discussed

There is some talk here of a merger between the various paper manufacturing companies in the St. Maurice Valley, and the fact that the control of the Belgo Paper Company has been changed from Belgian to Canadian interests has, it is claimed, made a general merger possible. The companies which are mentioned as possible parties to the merger are the Wayagamack, Belgo, St. Maurice and Laurentide. Apart from reductions in management expenses, savings in purchases and such customary economies that a merger would bring about, the big feature in this case is the fact that a great deal of expense and effort is involved in the sorting of logs on the St. Maurice River and its tributaries for the different mills involved. Many thousands of dollars a year would be saved on this feature.

New Tissue Mill in Ottawa Valley

A new tissue paper mill is to be established in the Ottawa Valley. The mill will be known as the Western Quebec Paper Mills, Limited, and will be located at St. Andrew's, P. Q. The president of the company is R. W. Barclay, president of the Western Quebec Power Company. The plant will have a capacity of 1,800 tons a year and contracts have been signed for the larger part of the output.

Paper Mill for New Brunswick

That the Hollingsworth-Whitney interests will erect a pulp and paper mill at St. Stephen, New Brunswick, is the statement made by David Maxwell, well-known railway engineer of that town. He said that large tracts of land have been purchased by this corporation and that they had secured water-power rights on the St. Croix River.

President Duke Inspects Grand Discharge Work

J. B. Duke, president of the Quebec Development Company, which is carrying on extensive works in the Chicoutimi and Lake St. John district, by the construction of a $15,000,000 dam at the Grand Discharge, during the past week has been inspecting the work done there, being accompanied by Sir William Price, J. M. McCarthy, W. S. Lee, New York, chief engineer, and Mr. Allan, an official of the company. It is now reported that the work already accomplished in the course of the winter reaches in value over $1,000,000.

Price Annual

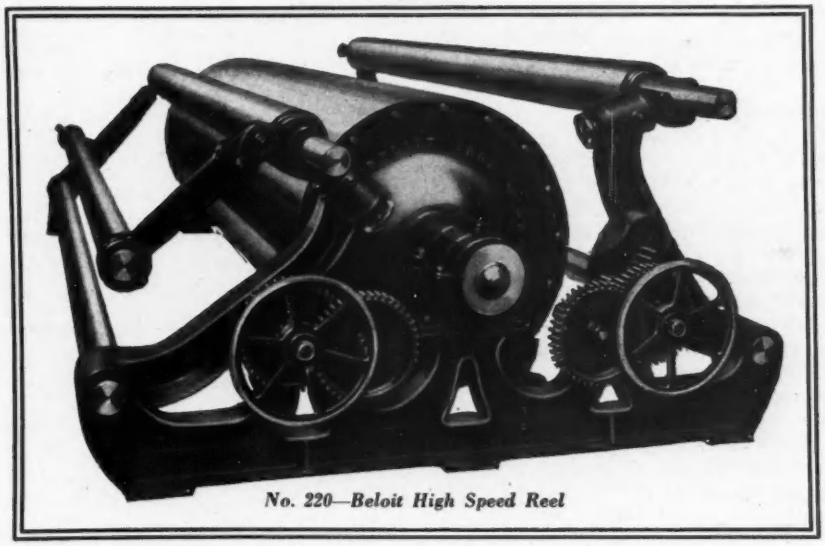
The annual meeting of shareholders of Price Bros. & Co., Limited, took place Friday afternoon. After the report, already published, regarding the operations of the company had been presented, routine matters were taken up. At a subsequent meeting of the directors which followed, the old board was re-elected as follows: President, Sir William Price; vice-presidents, J. H. Thompson, and J. M. McCarthy; secretary-treasurer, Harry Price.

Penn Yan Board Corp. to Start

PENN YAN, May 14, 1923.—The plant formerly operated by the Niagara Wall Board company on the outlet of Lake Keuka, will, it is expected, shortly be re-opened by a new concern, known as the Penn Yan Board and Paper corporation. J. B. O'Brien of Buffalo, who was instrumental in organizing the old company, is at the head of the new concern and he will shortly move to this village. It is expected that this village will be the headquarters so far as the office is concerned.

The new corporation will manufacture chip board, and it is expected to adjust the mill equipment so that many specialties may be made.

John M. Burley, formerly of Holyoke, Mass., and Benton Harbor, Mich., will be the superintendent of the plant.



No. 220—Beloit High Speed Reel

An Unusual Reel

THE BELOIT UNIFORM SPEED REEL effects a saving of paper every time you change reel drums. It displaces the old obsolete method, and insures steady, reliable performance plus absolute assurance of economy of operation. Furthermore, it entirely eliminates the danger of drawing men between reels of the conventional upright type, effecting a further saving in man power and accident liability. It can be depended upon to wind a beautiful roll that is very uniform in hardness.

Moreover the extra refinements added to this reel make it much handier than any of similar design. An instance of this is the ease with which paper is started on the drum. The passer does not have to change hands when performing this operation. Its simplicity and ease of operation is a revelation.

Let us know the face of your calender rolls and we will gladly submit a figure covering your particular case.

Beloit Iron Works **Beloit, Wis, U. S. A.**

UNSETTLED PAPER DEMAND IN THE TORONTO MARKET

Some Paper Merchants, However, Deprecate the Complaints Which Are Made by Certain Houses and State That Conditions Have Never Been Sounder and That They Are Doing a Larger Volume of Business Than a Year Ago at This Time—Dissatisfaction Is Expressed by Paper Dealers at the "Long Price" List, Although It Is Still Favored by Printers—Cameron & Fraser to Move.

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ont., May 14, 1923.—Business in the paper line continues spotty and various reports are heard with reference to the condition of trade. One wholesaler stated this week that all distribution houses were doing more than they did a year ago and should be satisfied with the volume. He deprecated the fact that some were still inclined to grouch at conditions, which, basically and fundamentally, were never sounder.

From this out there should be a steady improvement as the Budget had been brought down at Ottawa and there are no tariff changes affecting the paper trade and the outlook is getting clearer all the time.

One of the most expanding branches is the newsprint line. Recently the Abitibi Power and Paper Company at Iroquois Falls passed the mark of five hundred tons daily production. A few days later it was announced that the Spanish River Pulp and Paper Mills had touched the highest point in output at its three plants at Espanola, Sturgeon Falls and Sault Ste. Marie, Ontario, turning out over seven hundred tons daily. The company is the largest producer of newsprint in Canada and the third largest in America, being exceeded only by the International Paper Company and the Great Northern Company. It is reported that good progress is being made by the Spanish River Mills in floating last winter's cut of pulpwood down the various streams to the mills. The spring break-up came without any flooding, which is a condition highly favorable to the drives.

There is talk of several new propositions in the paper line. E. Newell, manager of the Dominion Envelope and Canton Company, Toronto, who is in England at the present time, is conferring with interests there regarding the establishment of a new board mill in Toronto. The business of the company has been growing rapidly of late and large quantities of board are consumed.

In waste paper prices on book and ledger stock and white blanks show a falling off owing to a rather slow demand. In domestic rags new cotton cuttings are sluggish and mills appear not to be particularly interested at present. In cover papers there is a good demand and one Ontario concern has conformed to the American standard in sizes and is shipping out 23x33 instead of the old size of 22½x28½. The old demi cover, 20x26 remains unchanged.

Barber-Ellis Extending Operations

Barber-Ellis, Limited, of Toronto, who a few months ago moved into a new and very commodious warehouse on Adelaide street west, are still expanding and, owing to the increased volume of business in Montreal, have opened a warehouse at 230 McGill street, in that city. The company will carry there a full stock of envelopes, papeteries and tablets. The new warehouse is in charge of Mr. Reid, who has covered the Montreal territory for the firm for a number of years.

Criticism of Long Price List

The "long price" list is in effect in Toronto among the jobbers and the printing trade. The majority of the wholesalers are adhering to it but some are inclined to fall away. One jobber received a letter from a customer outside of Toronto last week in which the hope was expressed that all the paper houses would agree to issue a net price list to the trade as formerly. The firm added "The 'long price list' is an unmitigated nuisance and the invoices sent out with deductions and plus and whole rows of useless figures are an annoyance pure and simple. We were never in favor of the change and so keenly do we feel on this matter, that we are prepared right now to transfer the bulk of our trade to any paper house that will issue a net price list."

One wholesaler stated lately that his firm never favored "the long price list" as it made a lot of extra office work but the printers inToronto, or the majority of them, seemed to want it.

Against Embargo on Pulpwood

Pulpwood cut from private lands can be exported from Ontario while that taken off Crown lands has, as is well known, to be converted into pulp or paper before being allowed to leave the country. Speaking at Elmvale, Ont., this week, Premier Drury, who is making an appeal to the electors of Ontario for a return to power, stated that he was not in favor of any embargo being placed on the export of settlers' wood. He declared that, if such a restriction went into effect, it would be a death blow to the settlement of Northern Ontario where pulpwood constitutes practically all that the settlers have to give them a revenue while they are clearing their farms. To bar them from disposing of their pulpwood for export would leave them in the hands of the big operators, the Premier asserted.

Notes and Jottings of the Trade

N. E. Wainwright, who represents the Port Arthur Division of the Provincial Paper Mills, Toronto, has returned from a successful business trip to Winnipeg. He has taken up his residence in Oakville for the summer months.

H. B. Donovan, of Toronto, sales manager of the Canada Paper Company, is spending this week at the mills of the company at Windsor Mills, Que.

W. H. Craff, representing Wiggins, Teape & Co. and Alex Pirie & Sons, London, Eng., was a caller upon the paper trade in Toronto during the past week.

H. G. Schanche, woods manager of the Abitibi Power and Paper Company, Iroquois Falls, Ont., has returned from a business trip to New York.

During the past week, two leading officials of the Spanish River Paper Mills, Sault Ste. Marie, Ont., celebrated the passing of another milestone.—George R. Gray, woods manager, who was born on May 4, 1865, and Col. C. H. L. Jones, manager of operation, whose natal day was on May 1, 1876.

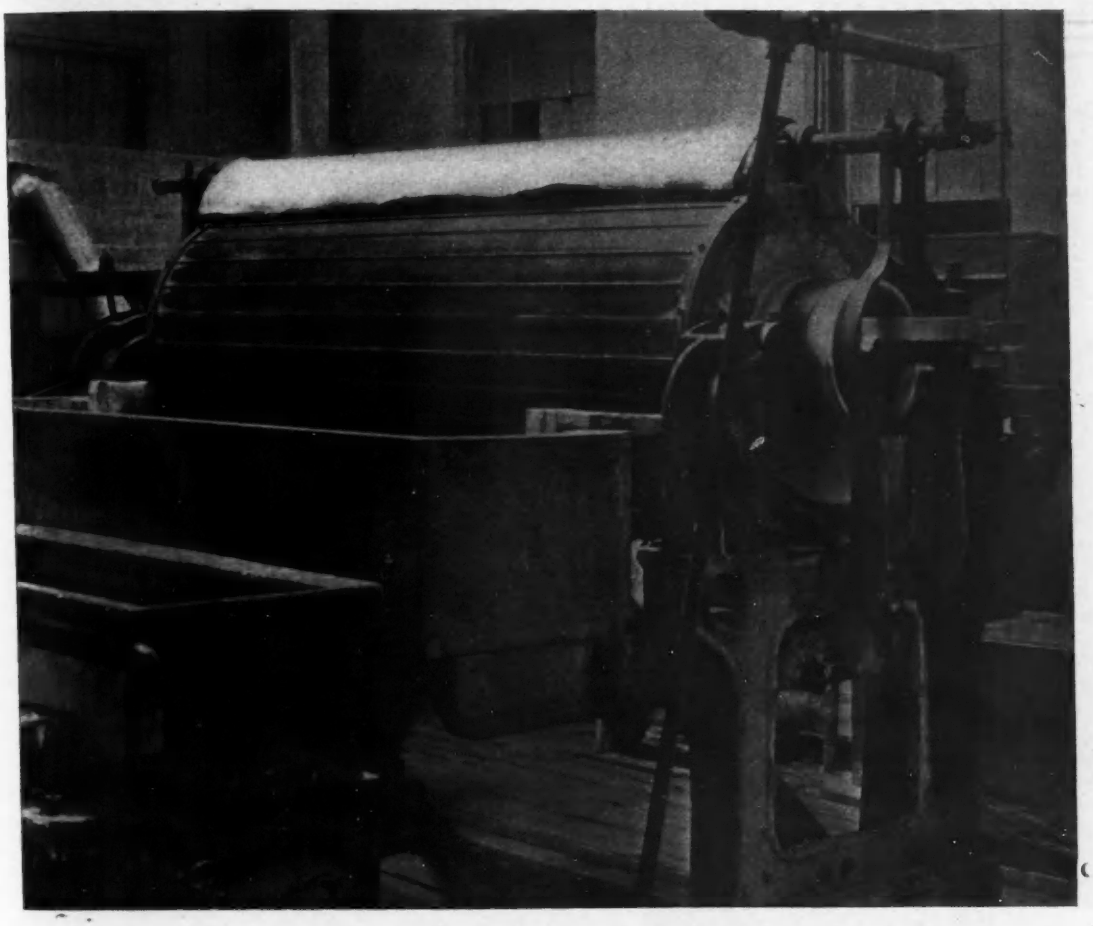
J. T. Jaeger, paper mill engineer, who has been at Iroquois Falls, Ont., with the Abitibi Paper Company for a considerable period, has gone to Thorold, Ont., where he will act as construction engineer for the Ontario Paper Co. in the erection of a large addition to the latter company's plant.

Charles V. Syrett, manager of the Victoria Paper and Twine Company, Toronto, who was associated with an unfortunate mishap in the motor line in Toronto about a year ago, is now devoting a measure of his spare time toward preventing similar accidents and has called the attention of the civic authorities in Toronto to several danger spots, which should be fixed up if accidents are to be avoided.

George Brigden, of Toronto, who is widely known in paper circles, has been elected chairman of the Ontario branch of the Canadian Manufacturers' Association.

It is understood that the Canadian Paperboard Company, which has mills at Frankford and Campbellford, Ont., and in Montreal, will make extensions to its power plant and increase its warehouse space and an offering of $400,000, seven per cent, first mortgage, sinking fund bonds is being made.

Major R. B. Herron, of Tionaga, Ont., has opened an office in Toronto and embarked in the wholesale lumber and pulpwood business.



The American Writing Paper Co.

uses this WALPOLE SCREEN to screen two of its highest grade Ledger papers—Government Record and Brunswick Linen—at its Agawam Mill. Production is approximately 500 pounds an hour.

BIRD MACHINE COMPANY

SOUTH WALPOLE MASSACHUSETTS

Western Representative
T. H. Savery, Jr., 1718 Republic Bldg.
Chicago, Ill.

Canadian Builders of Bird Machinery
Canadian Ingersoll-Rand Co., Ltd.
260 St. James Street
Montreal, Canada

THE WALPOLE SCREEN

5240

STEADY DEMAND AND FIRM PRICES IN PHILADELPHIA

While the Price Tendency Is Strongly Upwards Actual Advances Have Been of Minor Importance—Stability of the Market Is Tending to Encourage Buying—Paper Stock Market Is Inactive—Present Trade Customs Not Likely To Be Changed by Fine Paper Division to Allow Stationers More Favorable Rates in Broken Lots—Efforts to Form New Association Not Yet Successful.

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., May 15, 1923.—Next to the steady maintenance of the flow of orders, the trade is most pleased over the non-appearance of any radical price changes. There is some movement in mill quotations and these are all of an upward tendency, but they are only of minor amount, rarely running to more than five dollars on an entire ton, and the effect has been rather to encourage buying than to hinder it. It is the belief of the jobbers generally that at this time, no matter how real the cause for a radical advance might be, there would be restricted buying, even resentment, on the part of the consumer, because he is by no means in an impressionable stage just now on the question of big advances in prices. But he is impressed by the fact that on all lines of paper, as in nearly all of the other raw materials he requires in his business, there is a steady hardening of values and minor adjustments, but all of an upward nature, giving evidence of the strength of the market and at the same time inducements to be provident as to the future by making liberal purchases just now. In the fine paper division there is considerable activity in the sale of book papers, but bond writings, ledgers and bristols are moving along rather quietly. Among the printing paper interests attention is being concentrated on the news print situation. Anywhere between now and the first of June the contract prices for the year usually are fixed, and just what this year will bring forth is, of course, now a matter of pertinent interest. It is the best opinion that there will be no considerable change from the ruling rate of a base price of about $75 a ton for domestic news, f. o. b. mill, and that, of course, the price of the foreign-made news consequently will not change much, either. The latter is usually on a practical parity on c. i. f. deliveries with domestic news f. o. b. That makes the keen competition between the two products all along the Atlantic Coast points and as far into the interior as the region covered by a twenty-two to a twenty-five cent freight rate. The coarse paper market closely paralleled in sales and price conditions the fine paper. However, rope and jute papers now are largely sold on the basis of price at time of delivery, ruling rates being about a half-cent higher than they were a year ago. Apparently, the mills are all well booked up with business and deliveries can only be made in from six to ten weeks. Jobbing business in tissues, and particularly glazed and waxed papers, is quite active. The construction industry is an increasingly large buyer for all the grades of roofing, sheathing, deadening and other building papers.

No Material Change in Paper Stock

In the paper stock market the week passed with unchanged conditions. Local and nearby mills all operating full, apparently still have on hand sufficient mixed, common and other cheap stock to keep the machines supplied and they are not yet actively in the market again. Meanwhile the stock dealers, confident that they will be able to secure better prices just as soon as present mill supplies are exhausted, are only sending out the odds and ends they are compelled to get rid of, and are keeping the big bulk of the stock in their warehouses for the day of better prices. There is comparatively little material coming into the packing rooms despite the present house-cleaning season which ordinarily brings out a considerable volume, and therefore the traders are convinced that they can keep stock in storage until mill shipments are more attractive than at present. Meanwhile, although mills in the mid-West are displaying interest in securing supplies—one mail bringing to one of the largest dealers not less than five Western inquiries—the prices offered are not sufficiently large to induce shipments there. The stock dealers are of opinion that these faraway mills are more engaged in bargain hunting than in real buying.

Quietus on Broken Lot Agitation

Following a brief and rather informal discussion held last week at the meeting of the Fine Paper Division of the Philadelphia Paper Trade Association, the quietus in effect has been placed on the agitation of the stationers to have made effective some change in trade customs whereby the present differentials in the matter of ream against case lots, and in broken reams against original mill packing, can be modified. While the stationers are the good friends of the paper distributors, most of them are frank enough to say that after all the stationers' trade is a comparatively unimportant one with them, and does not measure up into any significance compared with the business which comes from the printers and the publishers. The paper men say that as a matter of fact it is the custom of the larger stationers to buy direct from the mills instead of from the paper distributors and that the paper merchants are only called on for supplies of smaller amounts, and in the words of one of them, "We are expected to accommodate the stationers with supplies of paper in retail quantities, but, of course, at wholesale prices. We shall do nothing of the kind. This question of the present differentials of between 7½ and 8 per cent on ream lots, as against whole cases, and of 25 per cent on broken reams, as against whole reams, most thoroughly was threshed out with the printers, who buy ten times as much as the stationers, and the present schedule is entirely satisfactory to them. As a matter of fact, the stationers know the situation well and their efforts to secure a modification will be futile and really were not put forth in a very vigorous or convincing way. One of the spokesmen for the stationers is known in the paper trade to be only a casual buyer from the legitimate dealers, but a regular purchaser of job lots and odds and ends." The Philadelphia Stationers' Association met on Thursday night of last week, but the subject of a modification of the differential was only discussed casually, and it is not believed that further efforts to bring about a change will be put forth.

Shuttleworth, Hogg & Mather Reorganize

A new name has just been taken by the business successors to the old-established firm of Shuttleworth, Hogg & Mather. The Mather interests, which are continuing the business, following the withdrawal from an executive capacity of H. J. Hogg, have incorporated and now are conducting the business as the Mather Paper Company in the warehouse at the northwest corner of Front and Arch streets into which the firm recently removed. Under the organization plan the officers are: President, Charles W. Mather; treasurer, James J. Gallen, of the Gallen Paper Company, and secretary, William S. Graham. The old organization was established over six years ago, and is engaged in the sale of coarse papers, bags and specialties. Recently the firm removed from the original home on Second street, above Arch, to the large quarters it now occupies at Front and Arch streets. William S. Graham was connected with the firm for five years as inside salesman. President Mather has been connected with the coarse paper industry for two decades and his firm represents several of the large mills in the Quaker City distribution.

Efforts to Organize Coarse Paper Dealers

There would also seem to be in the stage of rapid decline the efforts which were vigorously made some time since by James A. Loring, 299 Broadway, New York City, to organize here a paper

(*Continued on page 26*)

Why You Should Buy Niagara Beaters

Reason No. 6

Niagaras *Beat Thoroughly and make Better Paper*

Beating thoroughly and uniformly and so eliminating all dead spots Niagara beaters produce better stock. Moreover, in two to three minutes the color is uniform throughout the pulp mass, a material help in matching new shades. Not only is the quality of the stock improved but it is much easier to produce a standardized sheet. The importance of these two factors is self-evident.

Learn more about Niagara Beaters. Write a letter today asking for further information.

Valley Iron Works Company
Plant: Appleton, Wis.
New York Office: 350 Madison Ave.

Seven Additional Reasons

1. Niagaras save power.
2. Niagaras shorten beating time.
3. One Niagara does the work of two and sometimes three Holland beaters.
4. Niagaras save tremendously in floor space.
5. Niagaras lower labor costs.
6. The initial investment is lower.
7. Niagaras save on motors and belting.

STEADY DEMAND AND FIRM PRICES IN PHILADELPHIA

(*Continued from page 24*)

dealers' association among the coarse paper and twine distributors similar to those reported to be in successful operation in New York and in Boston, and which are said to have done much to standardize if not to raise prices. During the week those who attended two previous meetings at which efforts were made to organize here, were in receipt of a letter from Mr. Loring enclosing a return postal in which he requested that he be advised whether they still had sufficient interest in the proposition to attend a meeting at the Bourse on May 16. He advised the recipients further that if replies indicate enough interest, the meeting would be called, or else the subject would be dropped. It is admitted that in Philadelphia there is demoralization in the coarse paper business and that prices are often slashed below the point of profit and frequently also mean a loss. But on the other hand, it is felt that improvement can be effected by individual action, but that organized effort to bring about a change is fraught with possibilities of harm. Mr. Loring has always contended that the kind of organization he is desirous of getting together is entirely legal and that its members would be free from governmental interference.

New Container Company Organized

Robert H. Soden, who until recently was general manager of the Crescent Corrugated Products Company, Fifth and Noble streets, and who during the four years of his management of that business greatly increased its production as a result of a complete reconstruction of the plant equipment and the modernizing of all its units, is leaving the city at the end of this week to establish his own business of the Connecticut Corrugated Container Company in South Norwalk, Conn., an industrial community of thriving growth and one offering exceptional opportunities by reason of the location there of many important industries, for a container box and corrugated specialties manufacturing plant. He will also make and sell corrugated paper products to the industries. He has secured a site on the river front, with a dock two hundred and sixty feet long, a railroad siding entering the plant which has available for his purposes thirty-five thousand square feet of space on a single floor, being part of the premises formerly occupied by the Norwalk Iron Works. Mr. Soden, who is an electrical as well as a mechanical engineer, during the four years of his services here, increased the production of the Crescent plant about seventy-five per cent, as well as modernized all its equipment. He instituted the cost system and made other improvements in both the manufacturing and the accounting departments. The Crescent Corrugated Products Company is owned by William K. Jeffries, Walter P. Miller and George Reach, of the A. J. Reach Company. In the new equipment of the Connecticut Corrugated Container Company at South Norwalk there will be installed as an initial equipment fourteen machines, which will be ready for the employment of fifty hands in their operation by the end of this month. Equipment consists of cutters, slitters, slotters and corrugaters. An especially designed raffel corrugating machine was built for the firm by the Progressive Corrugated Machinery Company, 1096 Flushing avenue, Brooklyn, N. Y., and will produce from one hundred and twenty-five to one hundred and fifty feet a minute.

Wages Increased at Keystone Paper Mills

A voluntary increase of ten per cent in the wages of fifty employees of the Keystone Paper Mills at Upper Darby, just outside of Philadelphia, was announced during the week. This mill recently was re-equipped for the manufacture of krafts and wax products, formerly having been devoted entirely to the manufacture of waterleaf goods. Proprietor W. A. Lindsay, in raising the salaries, conformed to the policy which the paper mills of New England and New York are following. Announcement also comes that the Reading Paper Mills Company made a similar increase in the pay of its working force at the several mills which it operates.

New Ownership of Minnick Machine Works

The business of the Minnick Machine Works, of Landisville, Pa., manufacturers of baling and tiering machines for the paper trade, has just been taken over by two sons of the late proprietor, Simon Minnick, who died a few weeks ago, following an illness due to the infirmities of old age in his seventy-eighth year. The present proprietors are Harvey and Simon Minnick, and they will continue the business at Landisville, Pa. The Philadelphia representative is George Wiegand, 3253 North Hope street.

Trade Notes

There was added this week to the stock of the Wilcox, Walter, Furlong Paper Company, 231 Chestnut street, Dictation Bond, made by the Fox River Paper Company, a medium-priced rag content bond in white only.

Hayward Beatey is now serving as local salesman in the Philadelphia office in the Bourse of the American Writing Paper Company. He came here from the factory at Holyoke, Mass., and is thoroughly versed in paper manufacture and distribution.

An addition of two salesmen to the paper specialties department of S. Walter, Incorporated, 144 North Fifth street, shortly will be made.

James B. Ramsey, who now in his eighty-fourth year enjoys the distinction of being the veteran of the Philadelphia paper trade, is a frequent visitor to the office of his son, J. Bradford Ramsey, Jr., mill representative, in the Drexel Building. President Joseph G. Mitchell, of the Quaker City Paper Company, is second in point of years and of service in the industry. He is daily active in the business.

Charles Beck, head of the Charles Beck Machine Company, 609 Chestnut street, left this week for an extended trip in the West, accompanied by J. F. Wilhelm, of the Beck Paper Company sales force. While in the West they will attend the Indianapolis convention, being held this week by the National Paper Box Manufacturers' Association, where the Beck company has a booth, exhibiting both machinery and paper boxmakers' supplies. Following the convention, Mr. Wilhelm will not only cover the West but also New York State trade before returning to headquarters.

Good Demand for Paper in Boston

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, Mass., May 16, 1923.—Conditions were generally good in the market this week. There has been an unusually heavy demand in the board market for the past fortnight, with the result that prices have advanced somewhat. Demand the last few days fell off slightly, but dealers here look for the demand to come back within the very near future.

The paper market remained about stationary, with no material changes in prices. There has been an advance of 10 per cent in the price of card board this week, however.

Demand was slow in old papers and rags. Prices held stationary, with the exception of No. 1 mixed shavings, which dropped about $1 a ton. Orders came in slowly, and there was little life to the market. Jobbers here look for a sharp advance in paper stock shortly, because of recent wages increases and other conditions in the mill districts.

Knight, Allen & Clark, Inc., of 177-179 High street, Fort Hill Square, have recently opened a branch office at 62 Custom House street, Providence, R. I. Frederick W. Wyman has been placed in charge of this establishment, and the company hopes to better serve the interests of its customers in this territory.

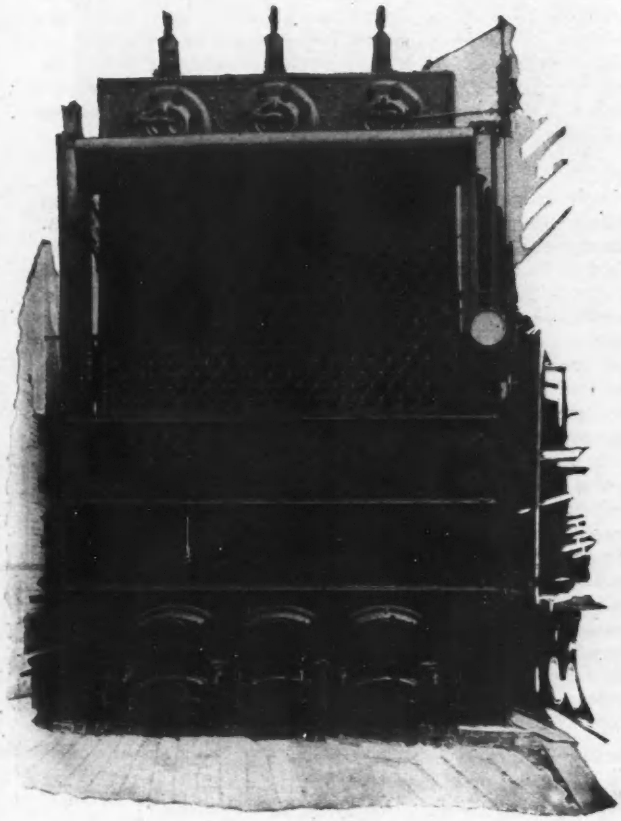
HEINZ 57

THE makers of the famous "57 Varieties" are among the leaders of the food products industry who have selected Edge Moor Water Tube Boilers for service in their power plants.

The illustration shows a 593 H.P. Edge Moor Boiler in the H. J. Heinz Company's plant at Salem, N. J.

Where efficient performance, economy of maintenance, freedom from repairs, and long service are considered essential, Edge Moor Boilers satisfy every demand. Their selection by successful concerns such as Heinz is the result of their exceptional records in a score of leading industries.

The Edge Moor catalogue contains a great deal of information valuable to power plant men. We shall be glad to send you a copy.



EDGE MOOR IRON COMPANY
Established 1868
EDGE MOOR, DELAWARE
New York Chicago St. Paul Boston Pittsburgh Charlotte

EDGE MOOR Water Tube BOILERS

EDGE MOOR BOILERS EDGE MOOR, DEL. U.S.A.

FOR INCREASED FUEL ECONOMY

HAMMERMILL SALESMEN HOLD MEETING AT ERIE

Third Annual Gathering of Sales Agents of the Hammermill Paper Co. Is Attended by Representative Paper Merchants From All Over the Country—Addresses Are Made by E. A. Petrequin, George Ward, W. B. Stevenson, Dr. Hugh P. Baker, Secretary of the American Paper and Pulp Association and Other Well Known Paper Men—List of Those Who Attended.

[FROM OUR REGULAR CORRESPONDENT.]

ERIE, Pa., May 12, 1923.—The third annual meeting of the salesmen of Hammermill Agents was held here May 3 and 4. For the first time in the history of important Hammermill business meetings, Ernst R. Behrend, president of the company, was absent. Mr. Behrend is in Europe on the last leg of a world-encircling tour.

Registration and getting acquainted took the greater part of the first half day. After luncheon the salesmen were given the opportunity to get acquainted at first hand with the manufacturing process and control at Hammermill.

Addresses on Salesmanship

In the evening the visiting salesmen listened to a series of short addresses on problems of salesmanship. The speakers wert E. A. Petrequin of the Petrequin Paper Company, Cleveland, George Ward of D. L. Ward Company, Philadelphia, W. B. Stevenson of A. Storrs & Bement Company, Boston, and Dr. Hugh P. Baker, secretary of the American Paper and Pulp Association. Dr. Baker made a stirring appeal for reforestation in this country on the scale practiced in the Scandinavian countries. He emphasized the fact that the paper industry cannot continue permanently unless wood, the principal raw material, is grown deliberately to provide a continuous and adequate supply.

The history and policies of the company were outlined at the opening of the second day's sessions by Norman W. Wilson, vice-president of the company, and W. S. Epply, manager of sales. An open discussion of sales problems followed.

George R. Burkhardt, vice-president of White & Wyckoff Manufacturing Company, E. V. Johnson, manager of P. P. Kellogg & Company, Division, C. W. Chabot, advertising manager of the Hammermill Paper Company, Charles J. Babcock of the George Batten Company, advertising counsellors, and N. W. Wilson, vice-president of Hammermill, were speakers at the afternoon business session.

Among Those Present

Among those registered were:

George Meineker, Richard H. Van Laer, Arthur J. Keller, Hudson Valley Paper Company, Albany, N. Y.

H. W. Rowe, Dobler & Mudge, Baltimore, Md.

John H. Eversman E. T. Mudge, 2nd, Wm. A. Biscoe, Wm. L. Katzenberger, O. F. H. Warner & Co., Baltimore, Md.

R. H. Welsh, Carter, Rice & Co., Boston, Mass.

L. R. Mathers, W. B. Stevenson, A. Storrs & Bement Company, Boston, Mass.

C. E. Briggs, C. D. Abbey, C. L. Bentley, Alling & Cory Company, Buffalo, N. Y.

Wm. R. Gazelle, Wm. J. Blake, Holland Paper Company, Buffalo, N. Y.

Wm. H. Howe, Wm. H. Howe, Buffalo, N. Y.

L. J. Flory, C. W. Hallenbeck, W. J. Ryan, Paul H. Shinn, B. Hockstadter, F. J. Stoltenen, George Krisenger, Bradner Smith & Company, Chicago.

John D. Swigart, C. E. Yocum, J. J. Kerwin, R. W. Keyt, W. H. Geist, F. M. Johnson, H. E. Pettersen, Swigart Paper Company, Chicago.

W. J. Blair, Harold W. Walker, J. W. Hargett, Diem & Wing Paper Company, Cincinnati, Ohio.

Mark D. Wilson, R. D. Wilson Sons & Company, Clarksburg, W. Va.

E. A. Petrequin, Thomas Fox, Charles McGrath, Petrequin Paper Company, Cleveland, Ohio.

J. J. Howard, L. E. Solomon, Crane-Howard Lithograph Company, Cleveland, Ohio.

E. T. Nicholas, Manifold Printing Company, Cleveland, Ohio.

C. F. Talkenberg, Central Ohio Paper Company, Columbus, Ohio, (Huntington, W. Va.).

H. T. Bretelle, O. W. Schumann, Beecher, Peck & Lewis, Detroit, Mich.

Harold A. Thayer, Carter, Rice & Carpenter, Denver, Col.

William Harrison, Jr., Payton Paper Co., Duluth, Minn.

P. M. Duggan, Geo. J. Kuebel, J. R. Hauser, Durico Paper Company, Erie, Pa.

W. A. Cour, Western Newspaper Union, Fort Wayne, Ind.

Harry G. Keffer, H. C. Roeder, Johnson Paper Company, Harrisburg, Pa.

Geo. R. Burkhardt, A. H. Sampson, White & Wyckoff Manufacturing Company, Holyoke, Mass.

Ray C. Pryser, C. M. Yates, Dudley Paper Company, Lansing, Mich.

Carl R. English, Western Newspaper Union, Little Rock, Ark.

H. H. Winne, J. J. Imholz, The R. A. Bouer Co., Lansing, Mich.

D. S. Leslie, John Leslie Paper Company, Minneapolis, Minn.

G. L. Webb, Chas. F. Spalding, A. Storrs & Bement Company, New Haven, Conn.

C. G. Swanson, W. A. Rutz, L. T. Brown, New Haven Paper Company, New Haven, Conn.

C. J. Babcock, W. F. Moore, George Batten Company, New York.

J. H. Bernstein, T. R. Banning, Ben Glickenhaus, Beekman Paper and Card Company, Inc., New York.

A. C. Thomas, A. E. Shaw, C. A. Zanes, Jr., F. A. Flinn, Inc., New York.

Roger B. Taft, Hammermill Paper Company, New York.

T. J. Thumser, T. G. Sweet, R. K. Wolft, Lasher & Lathrop, Inc., New York.

George Mahlstedt, Frank Rinck, A. E. Higgins, V. Corell, W. H. Feakens, L. J. Wandler, Henry Lindenmeyer & Sons, New York.

Leonard Schwalbe, C. P. Gallagher, Union Card and Paper Company, New York.

Dr. Hugh P. Baker, American Paper and Pulp Association, New York.

J. R. Stevens, William A. Stahlin, A. C. Damon, Paul E. Vernon & Co., New York.

R. B. Wixson, Carpenter Paper Company, Omaha, Nebr.

Eugene A. Eberzole, Western Paper Co., Omaha, Nebr.

John P. Schmidt, C. K. Megronigle, N. W. Fort, Thomas W. Price Co., Philadelphia.

F. C. Van Gilder, A. B. Sherrill, T. J. Morgan, E. J. Malloy, Riegel & Co., Philadelphia.

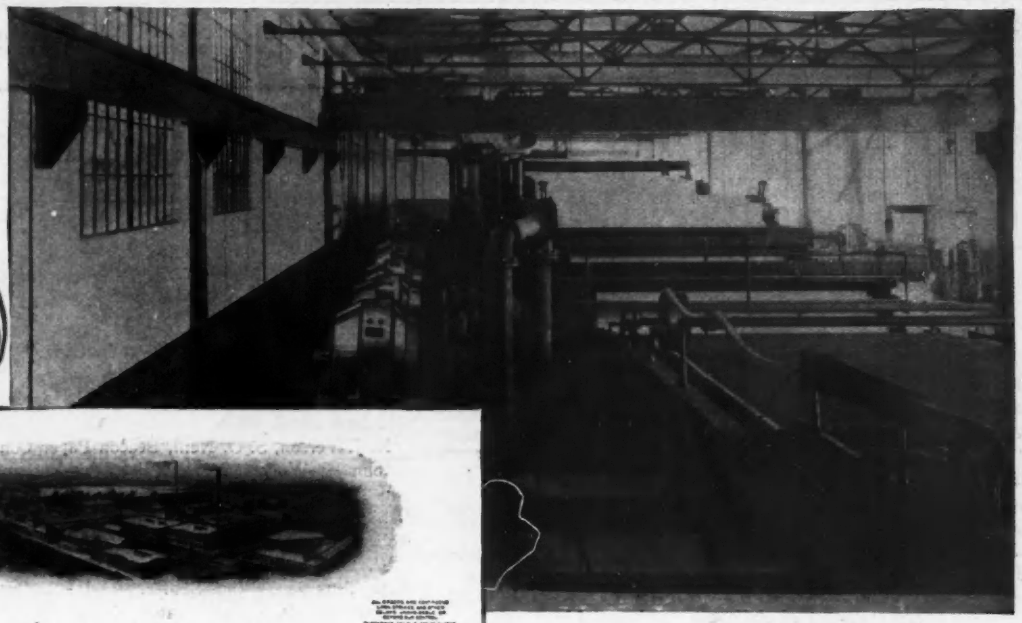
George W. Ward, Dietrich Conradi, Norman L. Jenkins, J. Harry Brandt, William S. Nunan, W. B. Gibson, D. L. Ward Company, Philadelphia.

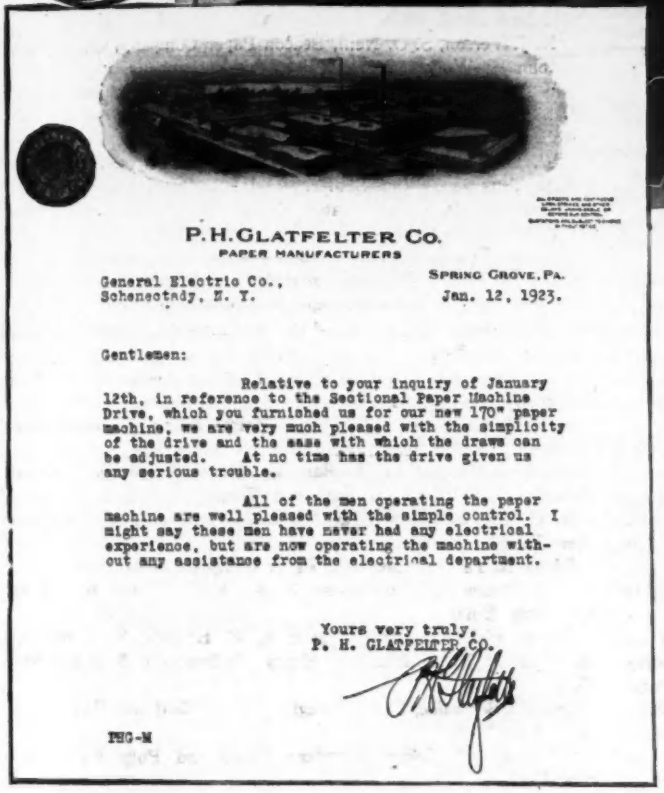
Carl D. Hardman, Walter R. Highley, Ralph C. Noble, Alling & Cory Company, Pittsburgh, Pa.

S. B. Gaines, Walter S. Tucker, Irwin Paper Company, Quincy, Ill.

C. Raymond Smith, Van Reed Paper Company, Reading, Pa.

(*Continued on page 30*)





P. H. GLATFELTER CO.
PAPER MANUFACTURERS

SPRING GROVE, PA.

General Electric Co.,
Schenectady, N. Y.

Jan. 12, 1923.

Gentlemen:

Relative to your inquiry of January 12th, in reference to the Sectional Paper Machine Drive, which you furnished us for our new 170" paper machine, we are very much pleased with the simplicity of the drive and the ease with which the draws can be adjusted. At no time has the drive given us any serious trouble.

All of the men operating the paper machine are well pleased with the simple control. I might say these men have never had any electrical experience, but are now operating the machine without any assistance from the electrical department.

Yours very truly,
P. H. GLATFELTER CO.

PHG-M

G-E Sectional Drive for Paper Machines

Installations In Operation:	No.
Glatfelter Paper Company, Spring Grove, Pa.	— Book 1
Crown Willamette Paper Co., West Linn, Ore.	— News 1
Mead Pulp and Paper Co., Chillicothe, Ohio	— Book 2
Ontario Paper Company, Thorold, Ont.	— News 1
Kimberly Clark Co., Niagara Falls, N. Y.	— Book 2
Spanish River Paper Co., The Soo	— News 1
St. Maurice Lumber Co., Three Rivers, Que.	— News 4
Consolidated Water Pr. & Paper Co., Wisc. Rapids, Wisc.	— News 1
Oregon Pulp and Paper Co., Salem, Ore.	— Kraft 1
Installations Under Construction:	
Kalamazoo Veg. Parch. Co., Kalamazoo, Mich.	— Specialties 1
Central Paper Company, Muskegon, Mich.	— Kraft 1
Southern Paper Co., Moss Point, Miss.	— Wrapping 1
Consolidated Water Power & Paper Co., Byron, Wisc.	— News 1
Warren Manufacturing Co., Milford, N. J.	— Specialties 1
Total	19

G-E Sectional Paper Machine Drive is operating successfully on all makes of machines, and all grades of paper —from 50 ft. to 1000 ft. per minute. We will gladly furnish you with estimate of G-E Sectional Drive for your paper machine.

GENERAL ELECTRIC

43B-74

BIDS AND AWARDS FOR GOVERNMENT PAPER

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., May 16, 1923.—The purchasing officer of the Government Printing Office has received the following bids:

1,200 lbs. 17 x 22—24 fine white glazed bond paper: F. T. Parsons Paper Company, $.42 per lb.; R. P. Andrews Paper Company, $.32; Reese & Reese, $.2671; Dobler & Mudge, $.28; The Whitaker Paper Company, $.38.

25,500 lbs. 21 x 31—102 buff bristol board: Carter, Rice & Co., at $.06; The Whitaker Paper Company, $.0607; Whiting-Patterson Company, Inc., $.0565; Old Dominion Paper Company, $.0634.

20,400 lbs. 21 x 31—102 bristol board: Carter, Rice & Co., $.06; The Whitaker Paper Company, $.0607; Whiting-Patterson Company, Inc., $.0615; Old Dominion Paper Company, $.0634.

60,000 lbs. 22½ x 28½—100 bristol board, 20" rolls: Carter, Rice & Co., $.0588; The Whitaker Paper Company, $.0591; Whiting-Patterson Company, Inc., $.0615; Old Dominion Paper Company, $.0594.

500 sheets 22 x 28 proving paper, coated one side: Louis Dejonge & Co., at $31.00; The Whitaker Paper Company, $29.00; Star Plate Corporation, $185.00 (2,500 sheets min.).

36,000 lbs. 22½ x 28½—75 manilla board, 21¾" rolls: Samuel S. Alcorn, at $.0545 per lb.; Dobler & Mudge, $.06; Reese & Reese, $.0587; Old Dominion Paper Company, $.0584; R. P. Andrews Paper Company, $.0674; Mathers-Lamm Paper Company, $.0623; Republic Bag and Paper Company, $.0598; Trinity Bag and Paper Company, $.0614.

35,000 lbs. 22½ x 28½—75 manilla tag board in 24" and 26¾" rolls: R. P. Andrews Paper Company, at $.0778 per lb; Dobler & Mudge, $.07; Old Dominion Paper Company, $.0729.

36,500 lbs. best quality binders' board, various sizes: The La Boiteaux Company, at $95.20 per ton; Kerr Paper Mill Company, $95.00; Mathers-Lamm Paper Company, $88.90; Ingalls & Co., $95.00; Dobler & Mudge, $100.00.

Bids will be received at the Government Printing Office on May 18 for 5,000 lbs. 24 x 36—86 oiled manilla tympan paper.

The purchasing officer of the Government Printing Office will open bids on May 21 for 9,200 lbs. (800 reams) of 17 x 28—11½ yellow bond paper.

The Government Printing Office will receive bids on June 4 for a quantity of waste materials which it has on hand. Among the items for which it will receive bids are:

3,000,000 lbs wrapping waste, waste sweepings, book cloth, and buckram clippings;

800,000 lbs. shavings from book papers (white);

650,000 lbs. printed waste, free from ground wood;

450,000 lbs. shavings from book papers (white and colored), mixed with colored cover paper trimmings, strawboard, and other binders' board trimmings;

200,000 lbs. discarded publications (mutilated);

150,000 lbs. cuttings from strawboard, pulp board, trunk board, tar board, and other binders' boards;

140,000 lbs. shavings from blanks and blank books;

3,500 lbs. manilla clippings;

10,000 lbs. twine and rope from bundles and sweepings;

2,000 lbs. discarded accounts books or ledgers (mutilated).

Dobler & Mudge has been awarded the contract for furnishing the Government Printing Office with 41,410 lbs. (680 reams) of various sizes white ledger paper at 28 and 29 cents, and The Whitaker Paper Company will furnish 20,100 lbs. (200 reams) of 20½ x 30½—100½, No. 60, heavy white ledger paper at $.3274 per lb. Bids for these items were opened on April 13.

The Allies Paper Mills will furnish 58,000 lbs. (1,000 reams) of 38 x 48—58 high M. F. opaque printing paper at $.0915 per lb., and The Whitaker Paper Company will furnish 30,600 lbs. (300 reams) of 21 x 31—102 buff and Quaker drab bristol board at $.0609 per lb., and the same firm will also furnish 50,000 lbs. of pink bristol board in 20"-rolls at $.0593 per lb. Bids for these items were opened on April 20.

The Whitaker Paper Company will furnish 55 reams, 19 x 24—100 brown rope paperoid at $.117 per lb., bids for which were opened on April 25.

BIDS FOR GOVERNMENT PAPER

(*Continued from page 28*)

R. C. Kuyk, E. S. Martin, S. L. Gray, Epes-Fitzgerald Paper Company, Richmond, Va.

R. E. McLeod, Epes-Fitzgerald Paper Company, Columbia, S. C.

John H. DeBlauwe, A. Robert Patchen, Alling & Cory Company, Rochester, N. Y.

E. V. Johnson, E. L. Wood, W. H. Lippmann, P. P. Kellogg & Co., Springfield, Mass.

H. J. Verson, S. O. Neill, Beacon Paper Company, St. Louis, Mo.

John H. Wolken, Mack Elliott Paper Company, St. Louis, Mo.

Wm. J. Wren, Wm. M. Graham, Megarges Brothers, Scranton, Pa.

Robert Hay, Geo. H. Allen, Buntin-Reid Company, Toronto, Ont.

W. J. Griffith, J. D. Keating, Troy Paper Company, Troy, N. Y.

Al Tennyson, Wm. Shafer, R. P. Andrews Paper Company, Washington, D. C.

W. E. Sayle, National Envelope Company, Div. Waukegan, Ill.

British Imports of Paper

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., May 14, 1923.—British imports of paper during January and February of the present year have amounted to 180,152 long tons, valued at £1,914,968, an increase of 70,404 tons in quantity and £501,109 in value over the previous year's imports for a similar period. The largest imports were in printings and writings (40,850 tons), packings and wrappings (57,630 tons), strawboard (53,944 tons), and millboard, leather board, and cardboard (17,862 tons). Sweden and Norway furnished the bulk of the printing and writing, and packing and wrapping papers, although substantial amounts of the latter also came from Finland and Germany.

H. S. Taylor to Practice Paper Engineering

DAYTON, Ohio, May 14, 1923.—Howard S. Taylor, formerly vice president and chief engineer of the Management Engineering and Development Company, has withdrawn from that firm and on May 1 began to carry on under his own name a general engineering practice dealing with pulp, paper, fiber and power plant development, with offices at Jefferson Street Arcade, Dayton.

R. W. Leeper, power engineer and H. T. Baker, designing engineer, also changed from the old organization to the new.

Mr. Taylor was elected president of the Technical Association of the Pulp and Paper Industry at the annual convention of the association held in April in New York.

The Baltic Paper Industry

The Baltic Paper Industry is the title of a publication which has been issued by the Nordischen Papier- und Zellstoffwerke, A.G., of Reval, and the Aktiengesellschaft Rigaer Papierfabriken, Riga.

The book is a description of the history and the development of these paper companies, and contains a complete account of their manufacturing capacities and equipment in the present-day establishments. The book is splendidly gotten up and is really a wonderful piece of work from the printing and engraving standpoint. It is filled with many fine engravings and halftones. It is interesting in indicating to what a high degree of development the art of company advertising has reached in Germany.

Established 1886

Reputation

"Who steals my purse steals trash,
But he that filches from me my good name
Robs me and makes me poor indeed."
—Shakespeare.

The immortal bard, through one of his characters, gave expression to the true meaning and estimate of a man's reputation. It is the one thing to be cherished and to be jealous of.

Success is not always measured in dollars. Of course, oftentimes, financial success goes hand in hand with good repute. What has given us infinitely more satisfaction than mere financial growth is the structure of good will which we have built up, the cornerstones of which are Integrity, Reputation, Service and Experience.

M. GOTTESMAN & COMPANY

—INCORPORATED—

18 East 41st Street
New York, N. Y.
U. S. A.

European Offices:
Stureplan 13,
Stockholm, Sweden.

Obituary

Col. Charles B. Wing

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., May 14, 1923.—Word has been received in Kalamazoo of the death of Col. Charles B. Wing at his home, Springfield Pike and Oliver avenue, Wyoming, a suburb of Cincinnati. He passed away Saturday afternoon, 70 years of age, after an illness of two weeks.

He was one of the best-known men in the paper trade, being originally with the Diem & Wing Paper Company, Cincinnati, and disposing of his interests there to become the first vice-president of the Bryant Paper Company, of this city. He held this office for many years and was generally popular with his fellow townsmen. The Wing homestead on West Main street was one of the most hospitable in the community.

Disposing of his interests in Kalamazoo, he returned to Cincinnati and established the C. B. Wing Superior Paper Company, with offices in the Ingalls Building, Fourth and Vine streets.

He took an active interest in politics in Ohio, being a life-long Republican and holding many offices. He was one time president of the board of street commissioners of Cincinnati and also a director of the board of the Hamilton County Workhouse.

He was formerly a member of the First Regiment, Ohio National Guards, and was a colonel on the staffs of Governors Bushnell and Nash. He was the originator and donor of the Wing medal, which was presented to members of the Cincinnati police force annually at public inspections, held at the park of the Cincinnati Baseball Club.

The death of Col. Wing marks the passing of the last honorary and original member of the Cincinnati lodge of Elks. He was also a Knight Templar and a member of the Business Men's Club and the Cuvier Press Club. During his career with the Bryant Paper Company he devoted a large portion of his time to sales promotion. He was a member of the Kalamazoo Park Club and the Kalamazoo Country Club.

He is survived by a widow, Mary B. Wing, and two daughters, Mrs. Roy Willis and Mrs. Dr. Lee Miner. The funeral will be held Tuesday, burial in Cincinnati.

Chicoutimi Hydro-electric Development

Remarkable progress has been made on the million dollar hydro-electric development of Price Bros. & Co., Limited, at Chicoutimi, Que., says the *Engineering Journal of Canada*. The actual work dates from November 5, 1922, when the contractors first appeared on the site. Concrete was first poured on January 18 of this year and to date 22,000 cubic yards of concrete have been placed out of a total of 26,000 cubic yards. The work has of necessity been pushed to the utmost in order to take advantage of the low-flow period of the river, so that until very recently the construction was carried on with night and day shifts, seven days in the week.

The south wing wall of the dam is connected to the gravity section connecting an Ambursen section 400 feet long which in turn is connected to a gravity section 150 feet long. The dam proper consists of a four tanker gate spillway section and a control sluice section, while for the intake, a gravity bulkhead dam approximately 100 feet in length with a short section of core wall on the north bank.

At present the sub-structure of the power house is completed the hydraulic equipment for which is being supplied by the Dominion Engineering Works, Limited, consisting of one 75,000 h.p., I. P. Morris, turbine. The electrical equipment is being supplied by the Canadian Westinghouse Company, Limited, while the headgates and the spillway gates are on order from the Dominion Bridge Company, Limited.

The consulting engineer on the work is Geo. F. Hardy, M. E. I. C., of New York; the general contractors are the Wm. I. Bishop, Limited, Montreal; and the resident engineer in charge of construction C. N. Shanly, A. M. E. I. C., with C. Ben Bate, A. M. E. I. C., as his chief assistant

Over One Thousand Forest Fires

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., May 7, 1923.—Hon. Honore Mercier, Provincial Minister of Lands and Forests, in a report on forest fires in the province last season, states that in the Province of Quebec there were in the course of the period from April, inclusive, to October, inclusive, 1,608 fires, as compared with 1,200 in the corresponding period of the previous year.

As to the causes of those fires, ascertained by the forestry engineers, lot clearing was responsible for 421 and unknown causes for 664. Among other causes were: Railways, 85, as compared with 196 in 1921, there being a marked improvement and more co-operation between the railway companies and the Government officials; unextinguished fires, 33; fishermen and campers, 343; railway and road construction, 22.

The area affected was equal to 743,652 acres, as compared with 800,000 acres in the previous year, but the damage caused was higher in the month of May alone, 552,506 acres were devastated. Mr. Mercier, commenting on the statement, added that the cost of fighting the forest fires last year, both for the forest department and the private concerns, reached over $500,000. Information he had on hand was to the effect that the conditions were by no means promising for the coming season. "Mr. Gustave Piche, chief forestry engineer," he said, "is inclined to believe that the year will be a very bad one, unless great care is taken, as a period of drought is forecasted, even worse than last year."

Flood Damages Penobscot Fibre Co.

[FROM OUR REGULAR CORRESPONDENT.]

OLD TOWN, Me., May 14, 1923.—The Penobscot Chemical Fibre Company's plant at Great Works suffered a damage estimated at around $100,000 in the recent flood, although the exact damage to the equipment cannot be told until the large generators are fully dried out after their immersion in the muddy waters of the Penobscot River. It is hoped that the soda mill will be started this week, while the rest of the mill will remain closed for a longer period.

President Hollingsworth, who was here last week to attend the annual meeting of the company, stated that the freshet had hit the company's property its hardest blow at the Great Works plant, and there was also considerable loss in pulpwood, which were forced from the booms upriver. None of the pulpwood at the mill were carried away.

The damage at Great Works was caused by the water flooding the generating plant and the soda mill. There was a protecting wall reaching a point four feet higher than the highest water mark previously made by the river in its freshets, but the recent flood rose above this wall, and breaking it down, let in an immense flood. Great quantities of ashes and debris were swept into the mill, with much damage, particularly to the generators. An electrical expert has been going over the machine, and reports that nothing can be done until the electrical apparatus is fully dried out.

New Business Quarters for Toronto Firm

Cameron & Fraser, wholesale paper dealers, are moving from 112 Bay street, Toronto, to 47 Simcoe street where they will have ten thousand square feet of floor space on one flat. F. G. Russell, late of Kilgour Brothers, Toronto, has joined the sales force of Cameron & Fraser.

W. M. Cameron, senior partner of the firm, is receiving the congratulations of his friends in the paper trade on his recent marriage to Miss Morgan, of Prince Rupert, B. C., the ceremony taking place in Old St. Andrew's Church, Toronto.

VELURE SURFACE

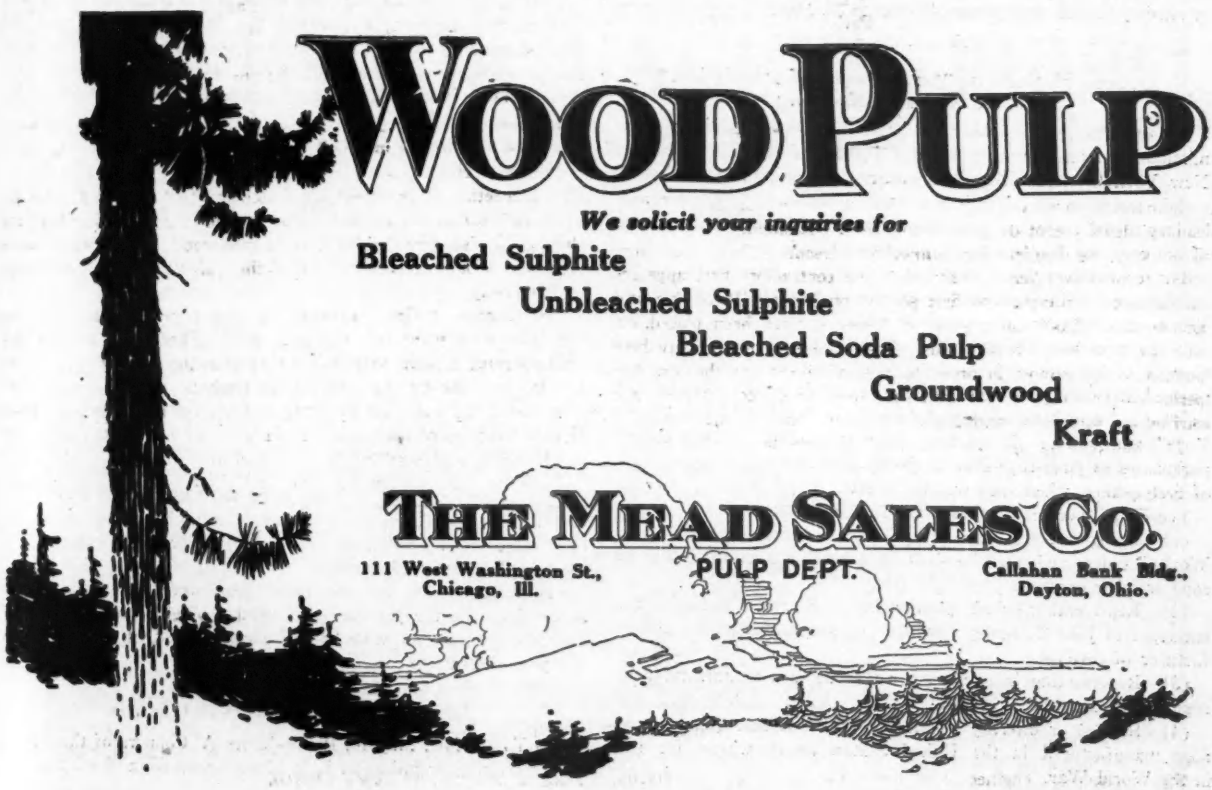
are recognized by the trade as

Standard Felts for Finish
and
VELURE Felts

are made only by

LOCKPORT FELT CO., Newfane, N. Y.

Adopt the VELURE System for Class



Recent Incorporations

OLYMPIA PAPER AND PULP COMPANY, Seattle, Washington. Capital $1,000,000. Incorporators, A. W. Quist, Henning Helin and Carl J. Smith.

PRODUCERS' PULP AND PAPER CORPORATION, Rochester, New York. Capital $250,000. Incorporators, J. S. Grant, R. T. Gallagher. Attorney, J. S. L. Purdy, Rochester.

LAY LUGO PAPER COMPANY, Manhattan, New York. Capital $20,000. Incorporators, L. O. Lay, F. M. Lugo, A. Avello. Attorney, F. A. Hutson, 41 Park Row, New York.

FRANK J. SMITH PAPER COMPANY, Columbus, Ohio. Manufacturing paper. Capital $1,500,000. Incorporators J. A. Aull and H. C. Johnson.

LIBERTY AUTOMATIC PAPER BOX MACHINE CORPORATION, Brooklyn, New York. Capital $10,000. Incorporators M. and D. Weiner, R. G. Clark. Attorney, S. Fingerssut, 215 Broadway, New York.

INTERALIA CORPORATION, New York; manufacture wood pulp paper. Capital, $100,000. U. S. Corporation Company.

GEORGE E. DOYLE PAPER COMPANY, Rochester, New York; realty. Capital, $20,000. Incorporators: G. E. Doyle, E. M. Rife. Attorney, R. H. Arndt, Rochester.

THE QUAKER HILL PAPER COMPANY, New Haven, Connecticut. Capital, $50,000. Incorporators: George P. Smith, Arthur W. Chambers and Helen H. Hitchcock.

NEW SERVICE CORPORATION; manufacture paper containers. Capital, $1,000,000. Incorporators: Miles Shevlin, R. Hauze, Howard B. Hauze, Chicago. Capital Trust Company of Delaware.

PRODUCERS' PULP AND PAPER CORPORATION, Rochester, New York; all kinds of paper, etc. Capital, $250,000. Incorporator: J. S. L. Purdy, Rochester, New York.

CAPITAL INCREASE

AMERICAN PAPER COMPANY, of Seattle, Washington; amendment increasing capital stock from $450,000 to $470,000.

Orders Misleading Advertising Discontinued

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., May 14, 1923.—The Federal Trade Commission has issued an order directed to the United Fibre Works, of New York City, requiring that concerns to discontinue the use of certain words in its advertisements and letterheads which are misleading to the trade and general public. John T. Bailey, as owner of the company is also named as a respondent in the case.

The commission found that the respondent's letterheads, by the wording, created the erroneous impression that the United Fibre Works manufactured the products which it offered for sale, and that the firm was the successor to the John T. Bailey Cordage Company. Further findings of the commission are to the effect that respondent sold rope which had deteriorated from age and handling as "Best Pure Manila Rope," "First Grade Best Pure Manila Rope" and similar designations thereby tending to deceive the purchasers of such rope into the belief that they were buying rope of first quality, when such was not a fact.

The order specifies that respondent must cease:

(1) Doing business under the trade name of "United Fibre Works," unless and until he shall have become a manufacturer of rope or other cordage.

(2) Representing on his letterheads, or otherwise that he is the successor of John T. Bailey Cordage Company, or any other manufacturer of cordage.

(3) Representing in any manner that he is a manufacturer of rope, when such is not the fact.

(4) Selling, or offering to sell as new or of best quality rope, rope manufactured in the United States, or elsewhere, for use in the World War.

Canada's Exports of Pulp and Paper

The regular report issued by the Canadian Pulp and Paper Association gives details of the exports of pulp and paper for the month of March. The total value of these exports last month amounted to $13,952,246 which was an increase of $3,968,568 or nearly 40 per cent over the previous month and also a considerable increase over the figures for March, 1922.

Details for March, 1923 and 1922, are as follows:

	March, 1922		March, 1923	
	Cwts.	Value	Cwts.	Value
Paper—				
News print	1,903,913	$6,793,128	2,268,998	$8,609,766
Book paper	86	1,114	5,826	37,767
Other paper and mfrs.	.....	663,656	.....	896,486
	.....	$7,457,898	.....	$9,544,019
Pulp—				
Sulphate	288,306	$902,254	305,229	$994,428
Sulphite bleached	196,846	920,790	344,818	1,522,479
Sulphite unbleached	299,767	828,453	442,309	1,168,226
Mechanical	390,506	562,937	410,682	723,094
	1,175,425	$3,214,434	1,503,038	$4,408,227

News print exports in March broke all previous records when they reached 113,450 tons, crossing over the 100,000 tons line for the first time; the previous high figure having been reached in March, 1922, with 95,196 tons. Exports of chemical pulp also made a new high figure with 54,618 tons exported compared with a previous high record of 53,670 tons in June, 1920. The total value of the exports of pulp and paper was the highest recorded since December, 1920.

The distribution of the March exports was as under:

	Paper	Pulp	Total
U. S. A.	$8,720,924	$4,175,288	$12,896,212
United Kingdom	202,803	55,505	258,308
All other	620,292	177,434	797,726
	$9,544,019	$4,408,227	$13,952,246

Our exports of pulpwood amounted to 113,493 cords valued at $983,436.

The Canadian fiscal year ends on March 31, and we can therefore make a comparison between the year just closed and the previous year 1921-22. Considerable increases in exports were shown, both in values and quantities, over the preceding year, demonstrating the good recovery made by the pulp and paper industry during 1922.

Details are given in the following tables:

	Fiscal Year 1922		Fiscal Year 1923	
	Cwts.	Value	Cwts.	Value
Paper—				
News print	15,138,327	$64,635,627	20,130,455	$72,667,826
Book paper	17,362	201,764	43,626	298,596
Other paper and mfrs.	.....	4,696,027	.....	6,601,519
	.....	$69,533,418	.....	$79,567,941
Pulp—				
Sulphate	2,377,556	$7,906,872	2,961,275	$9,262,393
Sulphite bleached	1,859,501	8,325,617	3,182,625	13,073,289
Sulphite unbleached	2,861,470	9,236,296	4,459,028	11,098,374
Mechanical	5,336,710	10,456,092	6,385,895	9,552,892
	12,435,237	$35,924,877	16,988,823	$42,986,948
Total pulp and paper	.....	$105,458,295	.....	$122,554,889

Thus in the fiscal year just closed our exports of news print increased by 33 per cent over the previous year and reached over 1 million tons, exports of book paper were more than two-and-a-half times greater, exports of sulphate pulp increased by 24 per cent, exports of sulphite pulp increased by 61 per cent, and mechanical pulp by nearly 20 per cent.

Pulpwood exports for the fiscal year were also considerably above those for the previous year being 1,096,462 cords, valued at $10,755,655 compared with 825,967 cords valued at $9,879,150 for the year 1921-22.

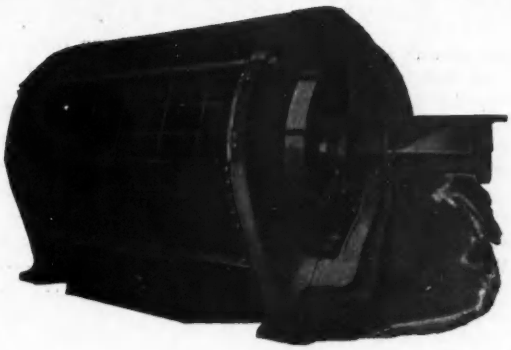
James A. Conners in Nova Scotia

OLD TOWN, Me., May 14, 1923.—James A. Conners of the Sewall timber cruising organization is in Nova Scotia on a short trip.

"IMPCO" TAILING SCREENER

FOR SCREENING GROUND WOOD TAILINGS

Very Low Power and Upkeep Expense



Delivers Rejections Free from Good Stock

ANOTHER UNIT OF OUR CLOSED SYSTEM FOR PULP SCREENING

WRITE FOR FULL DETAILS *CORRESPONDENCE A PLEASURE*

IMPROVED PAPER MACHINERY CO. **Nashua, N. H.**

SHERBROOKE MACHINERY CO., LIMITED, SHERBROOKE, CANADA

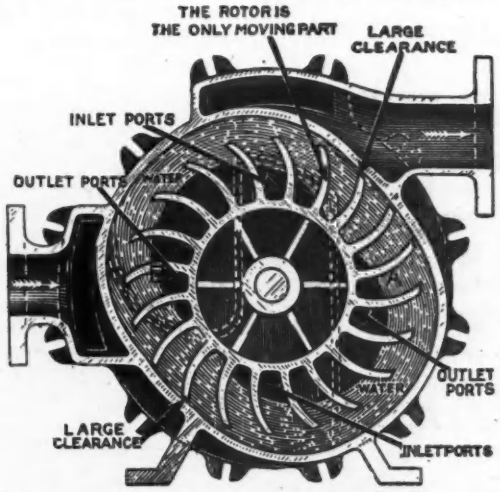
THE HYTOR VACUUM PUMP

FOR FLAT BOX SERVICE

Vacuum Produced Absolutely Without Pulsation

No Vibration

Saves Wires



Only One Moving Part

No Rods, Pistons, Crank Shafts Loose Moving Parts and No Gears

No Expert Attendance

Western Representative
T. H. SAVERY, Jr.
1718 Republic Bldg.,
Chicago, Ill.

THE NASH ENGINEERING CO.
WILSON POINT ROAD
SOUTH NORWALK, CONN.

New England Representative
G. H. GLEASON
185 Devonshire Street
Boston, Mass.

New York Trade Jottings

The Amsterdam Paper Company, Morris Heller, president, has purchased the two-story building at 2,141 Amsterdam Avenue.

* * *

W. J. Raybold, vice-president of the B. D. Rising Paper Company, was visiting among the members of the New York trade last week.

* * *

V. D. Simonds, well known in the paper industry as a consulting engineer, of Chicago was among the recent trade visitors in New York.

* * *

The Detroit Sulphite Pulp and Paper Company, Detroit, Mich., has leased offices in the Canadian Pacific Building, 342 Madison Avenue.

* * *

L. M. Alexander, president and treasurer, of the Nekoosa-Edwards Paper Company, Port Edwards, Wis., was among the trade visitors in New York last week.

* * *

The organization committee of the Forest Industries Club has issued a booklet describing the club and qualifications for joining. The club has started a membership drive this week.

* * *

L. B. Steward, acting secretary of the Forest Industries Club, has removed his offices from 18 East Forty-first street and taken up his new quarters in the club rooms on the twenty-third floor of the new Pershing Square Building, on Forty-second street near Park avenue.

* * *

Warren B. Bullock has announced that he will supervise the planting of 12,000 trees near Winchester, Wis., some time this month. The work is in connection with the summer forestry camp for boys which he and Dr. Hugh P. Parker, executive secretary of the American Paper and Pulp Association, will open in Wisconsin on July 1.

* * *

Tentative dates were announced this week for the Fall Business Conference of the American Paper and Pulp Association. Subject to the approval of the executive committee the conference will be held at the Drake Hotel in Chicago during the week of October 8. The American Paper and Pulp Association Convention will be held in New York April 7, 1924.

* * *

Samuel Kachansky, for the past two years connected with The Eastern Folding Box Company, 405-417 East 4th street, New York, last week became associated with the office force of Gerofsky Brothers, Inc. of 19 Bond street. This addition to the personnel of the company is in line with the general expansion which Gerofsky Brothers has been undergoing in recent weeks.

* * *

George H. Carter, public printer who was designated by President Harding last week to represent the American government at the International Conference of Master Printers, to be held early next month at Gothenburg, Sweden, will sail from New York Saturday and spend the latter part of May in England as the guest of the Master Printers of Great Britain. After the conference at Gothenburg, which will be the first since the world war, he will make a study of printing methods and of the paper industry in Europe.

Reeves Pulley Co. Issues New Catalog

The Reeves Pully Company, Columbus, Ind., is now distributing its new and attractive 52-page catalog, T-44, descriptive of "The Reeves" Variable Speed Transmission.

It sets forth in complete detail, design and construction, various types of automatic variable speed control, compact individual drives and several other very interesting new applications of the transmission.

In addition the catalog gives complete horse power rating and dimensions of all sizes of transmissions manufactured by the Reeves Pulley Company. A copy of the catalog will be mailed you upon request.

Price of Paper Machine Wires

The Armstrong Bureau of Related Industries, for its clients, the manufacturers of paper machine wires, furnishes for publication the following prevailing market price information on brass Fourdrinier wires (new standard) as last quoted to the trade by the respective sellers and cleared through the Bureau:

Price per sq. ft.

No. 60 mesh	52 @ 53 cents
No. 65 mesh	55 @ 56 cents
No. 70 mesh	59 @ 60 cents
No. 75 mesh	62 @ 65 cents
No. 80 mesh	64 @ 75 cents

Wage Advances in Holyoke

HOLYOKE, Mass., May 14, 1923.—The White & Wyckoff Manufacturing Company announces an advance in wages this week, retroactive to May 1 of about 10 per cent. There are several readjustments at different percentages, but the average advance is about that figure.

The manufacturers have notified Eagle Lodge of the receipt of their communication asking for a wage advance, and Saturday nights shutdon. A conference will be held soon.

Ben C. Morris Resigns from Whitaker Paper Co.

DETROIT, May 14, 1923.—Ben C. Morris, associate manager of the Detroit Division of the Whitaker Paper Company, and director of the company, has resigned from the organization. Mr. Morris has been in the employ of the Whitaker Paper Company for twelve years; for seven years as salesman and manager of the Indianapolis Sales Office; four years as manager of the Indianapolis Division and since January 1 as Associate Manager of the Detroit Division.

Wilcox, Mosher, Leffholm Co. Formed

MINNEAPOLIS, Minn., May 14, 1923.—The recently organized Wilcox, Mosher, Leffholm Company has opened its wholesale paper house at 251 Sixth avenue south. The company carries a complete line of papers for printers and stationers. The three members of the firm have been with other paper houses in the city many years. Archie N. Wilcox, the president, was with one company 28 years. Paul S. Leffholm is vice-president and Jerry C. Mosher, secretary and manager.

George A. Galliver Locates in New York

HOLYOKE, Mass., May 16, 1923.—Word has been received here that George A. Galliver formerly President of the American Writing Paper Company has become affiliated with the Harrison Williams Company of New York City which specializes in financing industrial concerns and manufacturing propositions. Mr. Galliver owns a home in South Hadley which may be sold now he is established in New York City.

Paper Men to Attend Foreign Trade Conference

WASHINGTON, D. C., May 16, 1923.—John Matthews, Jr., chief of the Paper Division of the Department of Commerce, will attend the New England Foreign Trade convention to be held at Boston on May 18. Mr. Matthews will attend the commodity conference and it is expected that a number of paper manufacturers will be present at the convention.

Let Them Drink to your business health in cups you sell

each drink a cup—each cup a sale for you and at lowest cost of any cup on the market.

At such prices SALES RESISTANCE IS NEGLIGIBLE and our direct advertising assistance in your city will get immediate results as it is now doing in many cities.

Burt's Paper Drinking Cups are made of fine white paper, without wax to make drinks taste, and are reinforced so holders are not necessary. They are kept under glass and cannot be wasted or soiled before use.

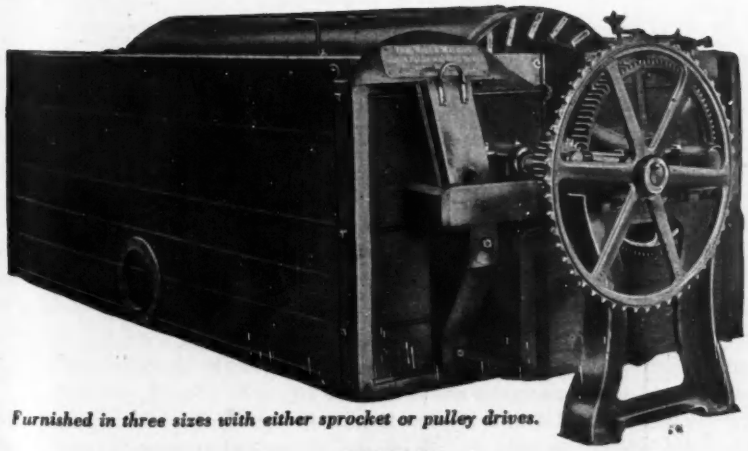
Cups retail at one fourth cent—dispensers at five dollars.

F. N. Burt Company, Ltd.
Paper Cup Division
Buffalo, N. Y.

THE WOOD'S MACHINE

Distinctive performance and intensified confidence in this machine as a Pulp Thickener, Save-All, Washer or Water Filter insure success in its building.

On the market but a few years, our installations number more than **Eighty-five. Twenty-nine sold** the past year.



Furnished in three sizes with either sprocket or pulley drives.

SIMPLICITY, in cylinder and vat construction, operation automatic, and without couch roll, doctor or any complicated moving parts.

DEPENDABILITY, in its simple revolving cylinder only, with nothing to get out of order, requiring little attention, and having a patented principle of maintaining wires always clean, insuring continuous performance.

PRODUCTIVENESS, enormous, through clean wires, large screening surface, patented unique method of discharge and freedom from shut-downs.

DURABILITY, by rigid construction, ample bearing surfaces, nothing to injure wires and highest grade materials.

All these enhance its value and involve upon you the duty of investigation.

MADE BY

GLENS FALLS MACHINE WORKS
GLENS FALLS, N. Y.

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Editorial

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HENRY J. BERGER, Editor

STABILIZING THE BOARD INDUSTRY

Paper board has always been considered one of the least stable commodities in the paper market. When fine papers, news print and other grades are sailing along on an even keel board is apt to be wallowing in the trough or tearing through the crests without any apparent reason. The rules which guide the rest of the paper trade do not affect board. It has rules of its own which, to the uninitiated, are wonderful and mysterious to behold.

Let the demand fall off slightly and the price is as likely to defy the well known gods of supply and demand and rise a few points. At other times the call for board may, to the outsider, appear strong or at least normal and the price shades down a little. Then possibly quotations will veer off at a tangent without the slightest excuse, swing clear around the circle and land where they started in the space of a few weeks.

Self appointed prophets in the trade say that this behavior of an article that really should be respectable can mean but one thing—manipulation. They hint of evils behind closed doors. Illegal collusion, price fixing and the various other iniquities included in the text book of sharp practice have been charged to the board men.

Few men in the other branches of the paper market pause to think of the problems that the board dealer and manufacturer have to face. They are apt to regard board as an unsettling factor to the whole market. They grumble about its instability, but do not stop to consider that board is subject to the same economic regulation to which every other commodity in this complex modern society is subject. Board is simply more sensitive than the others.

Board manufacturers have unstable conditions on both sides of them. In the raw material market they have to deal with waste paper and their consumers include practically every industry in the United States.

Waste paper is collected in the main during the warm season by probably the most irregular labor known to industry. If the Salvation Army, or some similar organization feels pressed for funds it sends its waste paper solicitors out broadcast and combs every nook and cranny for the product to throw it on the market. Prices go down in consequence and the waste paper dealers store to hold for better prices. If the pressure is too long continued they dump and the board men get a low quotation.

If on the other hand the country is prosperous people contribute to the charitable organizations that ordinarily solicit waste paper, labor is getting a good price and there are plenty of jobs, the waste paper is allowed to pile up in cellars until some city institutes a "Clean Up" campaign and the paper is destroyed. The board manufacturers then have to scramble for their raw material in a market of soaring prices.

When it comes to disposing of their product they are at the mercy of every wind that blows. A rise or a fall in any market has a direct reaction on them. If a hail storm hits the corn fields of the Middle West the board man feels it in a diminished market for his product. If a foreign soap or any similar household article in every day use suddenly crowds out a domestic product the board man suffers. They are in the most vulnerable position of any producer in the paper field because of the diversity of markets they have.

A definite movement has been gaining strength among the board men in the past weeks aiming at a correction of these conditions. They wish to stabilize their product, either artificially or otherwise, and one can scarcely blame them for this desire.

No one can doubt that such a stabilization, legally and ethically carried out, would be of great benefit to the whole paper market. One restless section of the market too often communicates its qualities to its neighbors by a sympathetic process. Paper men should welcome such a stabilization as the members of the board of trade are considering. No real method has yet been decided upon, but the other members of the trade may well wish the board men "more power" in a worthy cause.

TWO IMPORTANT CONVENTIONS

Two important national conventions of organizations in the pulp and paper industry are scheduled to be held before the conclusion of the unusually interesting and helpful series of national meetings that have been held this season.

They are the national convention of the Cost Association of the Paper Industry at Cleveland, Ohio, May 24 and 25, and the national convention of the American Pulp and Paper Mill Superintendents' Association at Springfield, Mass., May 31 and June 1 and 2. Very attractive programs have been prepared for both of these meetings, and they promise to be largely attended.

The program of the Cost Association of the Paper Industry includes numerous speakers of national prominence in the field of cost accounting. Thomas J. Burke, the secretary of the Cost Association, is authority for the statement that these speakers will make addresses that will be decidedly worth listening to.

Executives of paper manufacturing concerns, and the cost accountants in the industry, whether they are members of the association or not, are invited to attend the convention at Cleveland. They will be certain to profit individually, and the entire industry will profit from the increased interest that will be stimulated in the important matter of cost accounting by a large attendance at the convention.

Judging from the attractive program for the national convention of the American Pulp and Paper Mill Superintendents' Association, and the reports being sent out by the committee of arrangements, this year's meeting will easily be the most successful in every respect in the history of the association. The program calls for three days that, first of all, will be crowded with addresses, papers and discussions on the manufacture of pulp and paper, and secondly, with diversions after the convention sessions that will be certain to interest and please all who attend. As usual, ample provisions have been made for the entertainment of the ladies, and they will be certain to have no idle moments, even while the regular sessions of the convention are in progress.

This is the first time in the history of the Superintendents' Association that the organization has held its convention in New England, and the meeting will naturally do a great deal to arouse interest in the association among the superintendents of that section, and increase the helpfulness of the association generally.

Program for Superintendents' Convention

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., May 14, 1923.—A program of unusual interest and value has been prepared for the annual convention of the American Pulp and Paper Mill Superintendents' Association, which will be held at the Hotel Kimball, Springfield, Mass., May 31 and June 1 and 2.

Advance announcements of the plans for entertainment are now being mailed out by Miss P. C. Barrett, national secretary of the organization, and should be in the hands of all interested parties this week.

All business sessions, luncheons and banquets will be held at the Hotel Kimball. Thursday evening, May 31, the Paper Makers' Chemical Company, Holyoke, will serve a complimentary banquet, while Friday evening will occur the annual banquet and entertainment, with John J. White, treasurer and general manager of the Whitmore Manufacturing Company, Holyoke, as toastmaster.

A feature of Friday's happenings will be a 1 o'clock luncheon at the Summit House, Mount Tom, for both members of the association and their lady guests. All general business, including reports of committees, election of officers, installation of officers and similar details will be handled Saturday morning, the convention closing with a luncheon that noon at the Kimball.

The draft of the complete program follows:

THURSDAY MORNING, MAY 31

9:30—Registration.

11:30—Opening address, President J. H. O'Connell.

Address of welcome, Mayor Edwin F. Leonard, Springfield.

"Relationships in the Paper Industry," Dr. Hugh P. Baker, executive secretary of the American Pulp and Paper Association.

1:00—Luncheon, Hotel Kimball.

THURSDAY AFTERNOON

2:00—"Boothal Pulp and Water Saver," L. M. Booth, Booth Chemical Company.

"Suction Rolls," Harold Bing, Sandusky Foundry and Machine Company.

"Foaming of Paper," R. R. Best, Western Paper Makers' Chemical Company.

"Lubrication," T. E. Deal, Vacuum Oil Company.

Motion pictures, films being shown through the courtesy of Price Brothers, Ltd., Quebec, and Riorden Company, Ltd.

THURSDAY EVENING

7:00—Banquet, Hotel Kimball; compliments of the Paper Makers' Chemical Company, Holyoke, Mass.

FRIDAY MORNING

9:00—Sectional meetings.:

Chemical pulp superintendents, B. T. Larrabeen, chairman.

Board mill superintendents, Claude E. Nicely, chairman.

Printers and papermakers.

Sectional meeting chemical pulp superintendents:

"The Variables of Wood Chips," Theodore Safford, Racquette River Paper Company.

"Sulphite Mill Control," O. L. Berger, G. D. Jennsen Company.

"Action of Sulphur in Cooking of Sulphite Pulp from Jack Pine," Sidney D. Wells, Forest Products Laboratory.

"Losses in Making Soda Fiber," Edwin Sutermeister, chief chemist, S. D. Warren Company.

Sectional meetings, printers and papermakers:

"The Problems of the Printer," C. B. Porter, Springfield.

1:00—Luncheon, Summit House, top of Mount Tom.

FRIDAY AFTERNOON

2:00—"Waste in the Paper Industry," T. B. McBain, Nekoosa, Edwards Paper Company.

"Coloring of Paper," Kenneth T. King, E. I. DuPont de Nemours Company.

"The Beater," Herman B. Harrigan, American Writing Paper Company.

"The Value of the Save-All," A. W. Nason, Green Bay Foundry and Machine Company.

FRIDAY EVENING

7:00—Annual banquet, Hotel Kimball.

SATURDAY

10:00—Business session, including reports of committees, election and installation of officers, general business.

1:00—Luncheon, Hotel Kimball.

Penobscot Fibre Co. Elects Officers

[FROM OUR REGULAR CORRESPONDENT.]

OLD TOWN, Me., May 14, 1923.—At the annual meeting of the Penobscot Chemical Fibre Company the stockholders elected tas following: Directors, Amor Hollingsworth, Eugene H. Clapp, H. C. Barton, Walter V. Wentworth, Mrs. Sarah L. Clapp, Miss Antoinette Clapp, J. F. Gould, John S. Clapp, and G. A. Clapp. Officers were elected as follows: Amor Hollingsworth, president and general manager; Eugene H. Clapp, treasurer; W. V. Wentworth, clerk; Joseph F. Gould, general counsel.

Officers of the Penobscot Development Company, the timber operating subsidiary of the company, were elected as follows: Amor Hollingsworth, president and general manager; E. H. Clapp, treasurer; W. V. Wentworth, clerk; A. Hollingsworth, E. H. Clapp, W. V. Wentworth, J. S. Clapp, G. A. Clapp, directors; Joseph E. Gould, general counsel.

Walter V. Wentworth was chosen president of the Namakanta Dam Company, controlled by the Penobscot Chemical Fibre Company; E. H. Clapp, treasurer; J. F. Gould, clerk; and Eugene H. Clapp, A. Hollingsworth, Walter V. Wentworth, Joseph F. Gould and L. J. Friedman, directors.

Mr. Wentworth was also elected president of the Great Works Dam Company, with E. H. Clapp as treasurer and J. F. Gould as clerk; E. H. Clapp, A. Hollingsworth and W. V. Wentworth were elected directors.

Swedish Pulp and Paper Prices

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., May 16, 1923.—The American Consul at Stockholm has sent the following report to the Department of Commerce on Swedish wood pulp and paper prices:

Domestic prices of wood pulp during the middle of April were as follows: Unbleached sulphite, first quality, 240 to 250 kronor per metric ton; unbleached sulphate, first quality, 235 to 245 kronor per metric ton; and mechanical pulp, wet, 80 to 85 kronor per metric ton.

It is found quite possible to give actual domestic prices of bleached and easy bleaching sulphite, inasmuch as only very small quantities are sold to domestic consumers. The following are believed to represent as nearly as possible the actual prices per ton: Bleached sulphite, 375 kronor; easy bleaching, 265 to 270 kronor. There is likewise no home market for dry mechanical pulp, the present export price for which is 170 to 175 kronor per metric ton. All of the above prices are f. o. b. Swedish ports.

Paper Making at University of Michigan

The Department of Chemical Engineering of the University of Michigan, Ann Arbor, Mich., has just issued an interesting bulletin describing the courses and facilities. While the facilities for the study of pulp and paper making are only briefly touched on, it is planned by the department to develop a very complete course in this line. The Department of Chemical Engineering will be glad to send this bulletin to anyone who is interested in the development of this course in pulp and paper making.

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Section of the

Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G.MacNAUGHTON, Secretary

MITSCHERLICH PULP

By Dr. Arthur S. M. Klein

In describing Mitscherlich pulp, G. S. Witham, Sr., in his admirable book entitled *Modern Pulp and Paper Making*, says on page 105 that the pulp produced by the Mitscherlich process is of excellent quality, but that process has been largely abandoned on account of the following disadvantages: It is a very slow process to operate, the cooking time being very long, usually 35 to 40 hours and in some cases upwards of 60 hours. The pressure rarely exceeds 45 pounds. The digester has from 1,000 to 3,000 feet of lead or copper pipe coil in it for heating purposes which is constantly leaking and in need of repairs. . . .

Well against all this we can state as a fact that nearly 90 per cent of the real strong sulphite pulp coming from Scandinavian and German mills is cooked by the Mitscherlich process. Not, it is true, by the original Mitscherlich process, but by a practical modification based on 35 years of experience, some scientific research and greatly changed economic conditions. No mill cooking 60 hours could compete with the more up-to-date mills getting first class indirectly cooked pulp in 12, 14 or at most 20 to 22 hours cooking time. Besides this we would never handle wood grown upon different soils in the same manner and therefore I do doubt whether all the trails I read about in American journals for the purpose of standardizing sulphite cooking will ever give full satisfaction. The kind of wood, the climate, the conditions of growth, the mechanical appliances in the sulphite mills cause the products of different mills to be different in quality. I dare to assert that a mill has its own individuality and therefore it is often quite easy to tell from a small sample which mill made the pulp.

The characteristic point of the Mitscherlich process is that the wood is cooked in horizontal or vertical digesters mainly by indirect steam. Beside this a chemical control of the cooking is used which differs in different mills but is based upon the control of the consumption of the sulphurous acid, SO_2. Many mills titrate the SO_2 in the cooking liquor and note the decrease of the acid in connection with the temperature; acting on principles based upon experience they delay or hasten the rise of temperature, handling each cook as if it were a separate process. These are the mills noted for uniformity and reliability of their products. Others do not so much control work. They only watch the temperature curves and before blowing off they use the old Mitscherlich ammonia reaction, and determining by looking at the precipitate of monosulphite and judging from color, fineness and settling time of the precipitate, also from color, smell and stickiness of the liquor, whether the cooking is finished. These mills have to be more careful and to get out the uniform pulp the paper maker wants they usually have to take a longer cooking time.

Now if we take the several items which do influence the quality, we see that the quality of the pulpwood, the length of the chips, their thickness, the treatment in the digester—acid, temperature and time—exert the main influence but the treatment after the pulp is discharged from the digester and the drying also influence the quality of the pulp.

Wood

Looking through the secret instructions Mitscherlich gave to the first sulphite mills it is surprising how many details were correctly judged by him. First of all he cautioned the mills not to mix green and dry wood. He knew already the difference between wood of the same specie grown upon the northern and southern slopes and the difference between woods grown on the mountains and in the plains.

Today we know why it is disadvantageous to mix wood grown under different conditions and we know also how to chip wood, etc. If we have very short chips a good deal of the fibers are cut and the average length of the fibers of the pulp is below the optimum. This part of the manufacture has been studied thoroughly in the United States and I must acknowledge from what I saw while there and what I have since read in the technical publications that Americans can not learn in general anything this side of the Atlantic. This holds good as far as the chipping of the wood goes but the storing of the pulpwood is less carefully handled than here. I think this is one of the weaker points of the American mills because the storing and piling of the wood has a bigger influence on the quality of the pulp than people often have any idea. Out of a properly dried uniform wood it is easy when all goes well to get a strong and uniform grade. If dry and wet wood is mixed the acid does not penetrate the chips equally and as a result a part of the chips is overcooked and another part undercooked. The steaming of the chips before cooking, as done in Mitscherlich mills, does away partly with this trouble. But it does not eliminate the difference and therefore the mills are very careful not to mix chips of too varying moisture contents if it can be avoided.

Acid and Cooking

A good working European mill does not use more than 10 per cent sulphur in the manufacture of strong unbleached pulp. I can even add one of the mills I took care of recently, the Kyrkebyn in Sweden. In this mill I did not use more than this on the yearly

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average in making bleached pulp which would mean about 9 per cent sulphur calculated on strong unbleached. Now it is quite easy to understand why European mills do not use more sulphur in making strong sulphite. First of all the cooking liquor is usually not stronger than about 3.8 to 4.0 per cent total SO_2. We do not need the strong acid used by American mills in cooking our pulp indirectly because we do not dilute the acid by the condensed steam. Beside this we are more careful about the reclaiming of SO_2 gases and 30 to 40 per cent of the SO_2 used in the cooking liquor is reclaimed. I know cases where up to 45 per cent was reclaimed. How this is done is simply answered: By using sufficient cold water and sufficient coolers and last but not least relieving the pressure of the digesters more uniformly. This depends on the cooking process and is a detail which has to be studied on the spot in connection with all the other points.

It is astonishing how few pulp makers really understand cooking. Many graduate chemists think it sufficient to run about in sulphite mills and having served a couple of years they think themselves fit to make pulp. Well they are making something like pulp but a real good uniform quality was never made by anybody who had not himself worked and cooked for a number of years. If a man has a chance to do so under varying conditions in various countries and different mills this man may become an expert on cooking. There are so many small things which have a bearing on the quality that it requires beside large experience a certain sixth sense to notice all and eliminate what is not wanted.

The accompanying figures show the cooking of strong Mitscherlich pulp. Figure 1 shows the operation in a mill using digesters of 195 cubic meters net capacity which equals about 41,700 Imperial gallons. The cooking time was 10½ hours and the digester was heated mainly indirectly but at a certain point direct steam was added. The whole operation from filling with chips till the next filling took 16½ hours. The output per cook amounted to 17,510 kilograms air dry (88 per cent) pulp. Per cubic meter digester space 92 kilograms air dry pulp was produced, which equals about 0.9 pounds air dry (90 per cent bone dry) pulp per Imperial gallon digester capacity. Consumption of pyrites and limestone equaled 32.2 per cent and 19.2 per cent respectively, 7 pounds steam per pound pulp being used for power generation, cooking and drying the pulp. These figures are not very fine, the steam consumption especially being higher than we are used to today. I shall discuss this point separately and will now give the corresponding figures of Figure 2. The digesters were of about 100 cubic meters capacity, the cooking time including time for blowing off the pressure was 14 hours, direct steam not being used. The output per unit of capacity was from 5 to 6 per cent lower than in the first mill; 235 kilowatts of power were used per long ton of pulp, consumption of northern Swedish (Kiruna) pyrites was 27½ per cent, of limestone 18½ per cent, and of steam for cooking and drying 4 to 4.2 pounds per pound

FIG. 1.

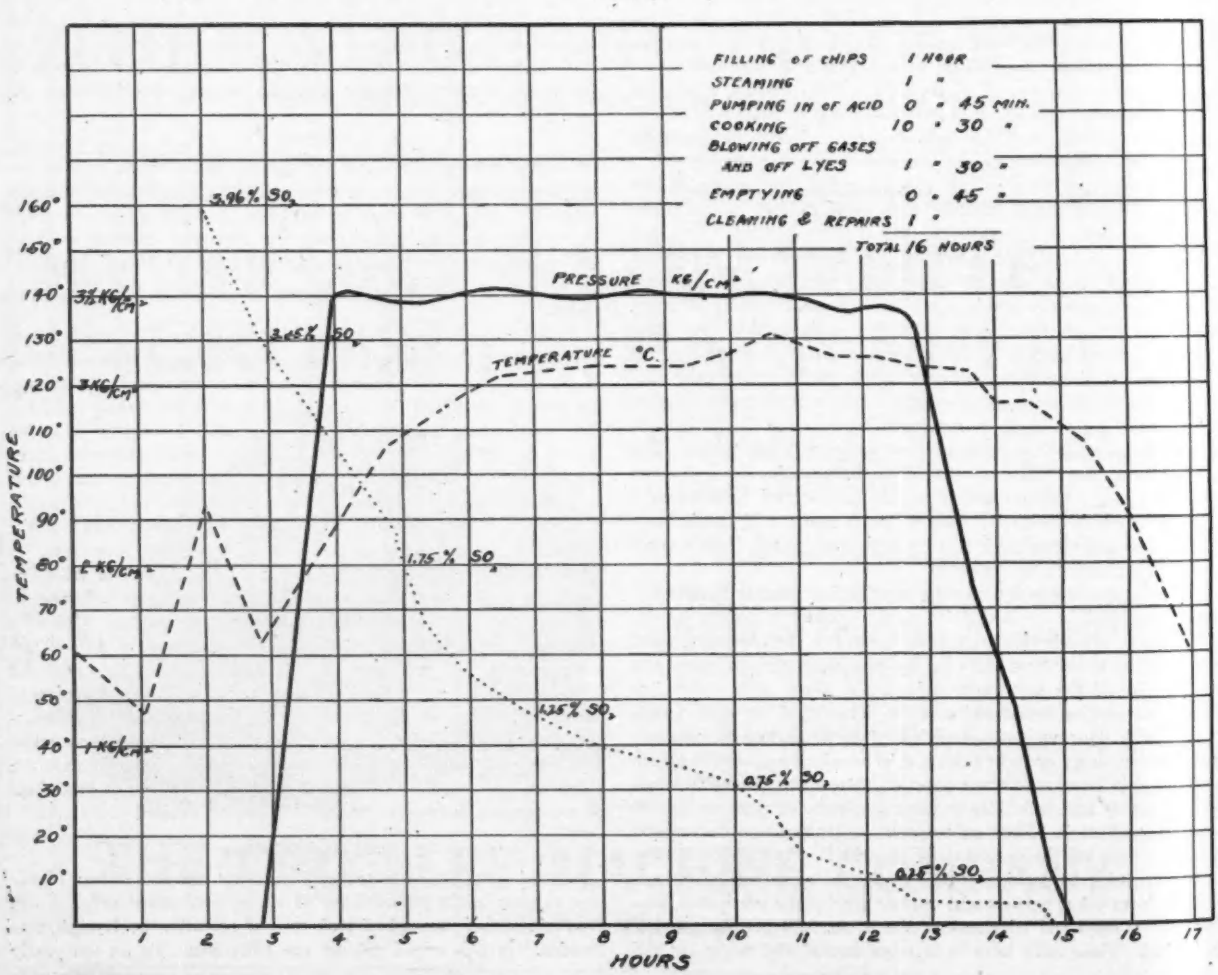

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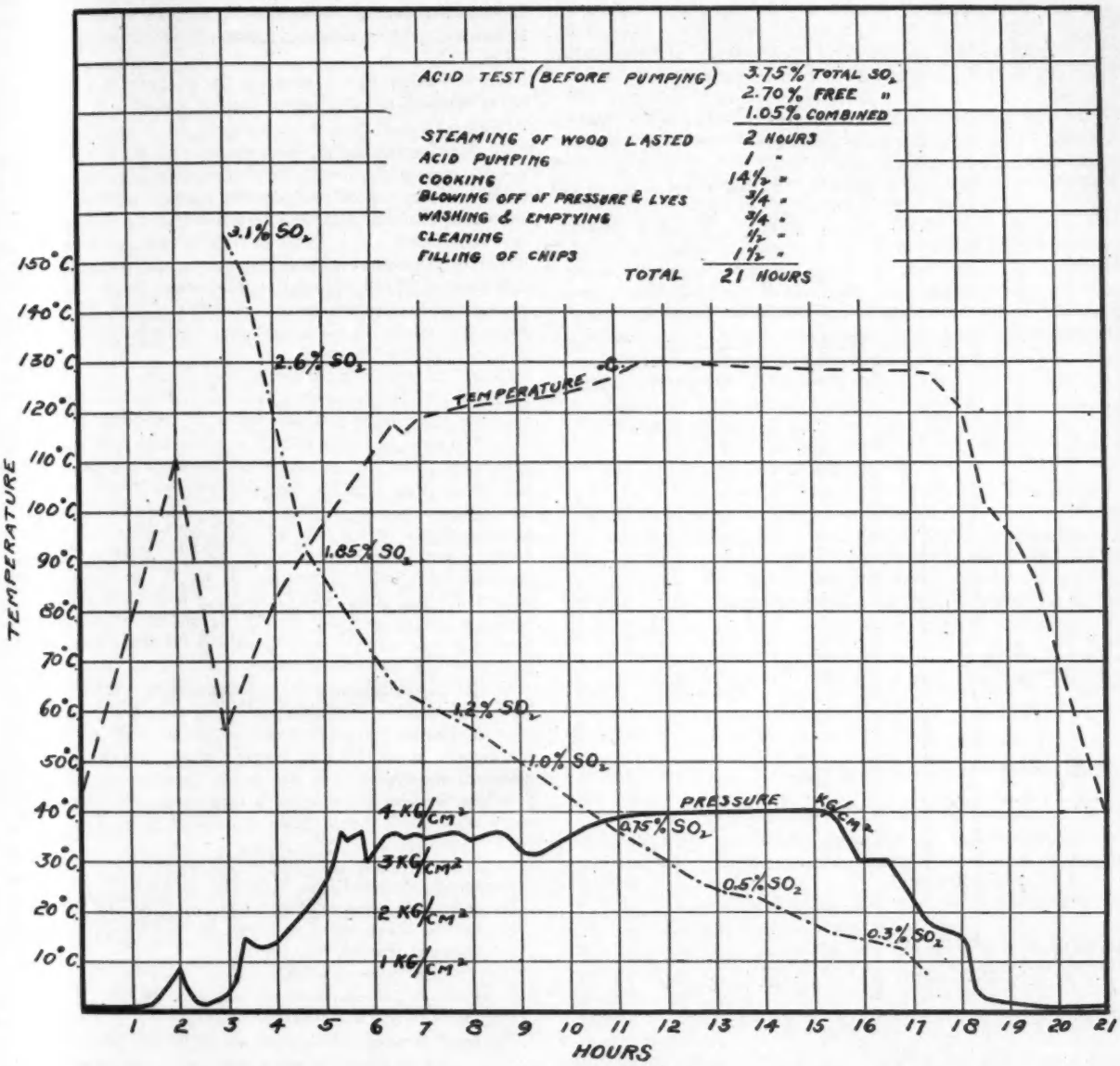
FIG. 2.



of pulp. The pulp produced in one of the best known strong Swedish sulphite brands.

The coils we are using are made of pure copper and they give little trouble and we ran our digesters for many weeks without repairs being needed. Usually we have no repairs on the coils until we have to look after the acidproof lining of the digesters which means about three months. The putting in of the coils does not take more than a couple of hours. The heating surface of the coils is, per 100 Imperial gallons digester capacity, about 2 square feet. As the diagrams give all data concerning time, temperature, strength of cooking acids, etc., it is not necessary to discuss these points separately.

Fig. 3 is taken from B. Thorbjörnson's publication as I wish to give a short but as far as possible exhaustive description of European methods. He says the mills he was employed in work in this way:

1. Chips are filled through "A."

2. After the digester is filled with chips the head is put into place and fastened with a couple of screws, and the steaming of the wood begins by opening valve "2."

3. Valve "7" is open and when the steam is coming out through it No. "2" valve is closed, the head is taken off and the digester is filled up with chips anew because by steaming the volume of chips is diminished, as in steaming the air between the chips and in the chips is carried away and the chips do not require the whole previous space. After this second filling of chips is effected the head "A" is replaced and screwed down fast. The second steaming, by opening valve "2," takes place. This goes on until dry steam comes out through "7," when "2" and "7" are closed.

4. After the second steaming acid admitted through "1."

5. In filling the digester with acid, we open "8" and let in a certain percentage of acid which is discharged from another digester which is in operation and under pressure. This means a saving of heat and sulphur. This system was introduced as far as I know by

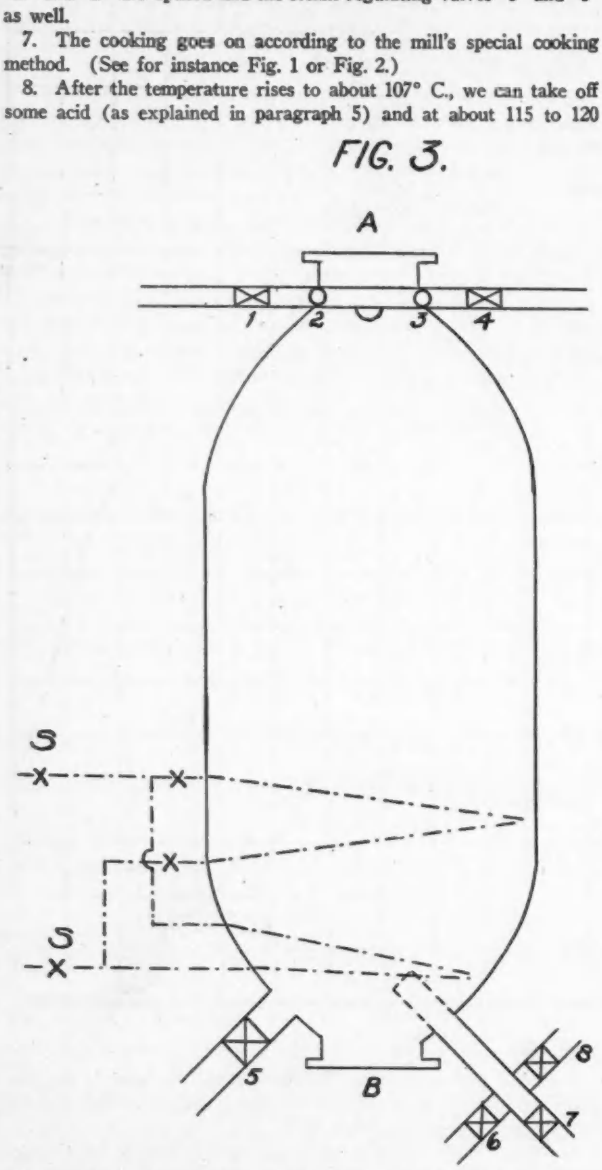
the late Mr. Stalnacke and gives excellent results provided it is done in accordance with local conditions. After the required quantity of acid from storage is pumped into the digester the valves are closed.

6. After we have sufficient acid in the digester the steam valves "S" and "S" are opened and the steam regulating valves "s" and "s" as well.

7. The cooking goes on according to the mill's special cooking method. (See for instance Fig. 1 or Fig. 2.)

8. After the temperature rises to about 107° C., we can take off some acid (as explained in paragraph 5) and at about 115 to 120

FIG. 3.



degrees we can do so the second time, using this acid for the next digester.

9. When the cooking is finished we open "3" and blow off the acid gases. This takes about one hour.

10. The waste liquor is discharged through "6." This takes from 1 to 1½ hours. "3" remains open all the time.

11. The valve "5" where we have water introduced is opened, then water valve "4" is opened too. The head is taken off and the contents of the digester are discharged through "5."

Heat Consumption

This shows how we usually work and I wish now only to give some data about the heat consumption in cooking sulphite by the indirect process. It is astonishing how little is published by Americans on this subject but on this side of the ocean we have quite an extensve literature on this problem. I published several papers years ago as also did later Lassberg, Alfthan, Thorbjörnson, Sundblad and others.

The following figures given in the publications mentioned are based upon the usual European units of calories. One cal. equals 3.96832 B.t.u.

1. An older German mill used per 100 kg. (88 per cent bone dry) air dry sulphite 665,000 cal., 25 per cent of which were used in the boiler house leaving 167,000 cal. For power generation 119,000 cal. were used (the real generated power being 22 kilowatt hours equaling only 19,000 cal.), 95,800 cal. therof being lost in the condenser of the steam engine.

A total of 197,000 cal. went to the digester house. The chemical reaction of the cooking process absorbed of this 12,750 cal., the waste liquor took off 124,000 cal., the remainder being lost by radiation, condensation, etc.

136,000 cal. went into the part of the mill where the pulp is dried. Out of this 103,000 cal. went into the air (steam by evaporating the moisture of the pulp) and the balance lost by condensation, etc.

2. The same mill after putting in heat-saving services, used only 448,000 cal. 25 per cent or 128,700 cal. were lost at steam generating, 205,580 cal. went into the high pressure and 150,900 cal. into the low pressure part of a back pressure steam turbine. The high pressure part yielded 8 kilowatt hours and beside this 197,000 cal. could be used in the digester house. Of this, 37,000 cal. came from the acid which had a temperature of 45° C. In this case 50 per cent of the heat of the waste liquor was used for heating the acid before it was pumped into the digester and from the same source came a part of the heat used for raising the water used for steam generating to a higher temperature.

150,900 cal. of the low pressure steam turbine yielded 18 kilowatt hours and 136,000 cal. used at the drying machines.

3. A Swedish mill requires per ton (90 per cent) dry sulphite at the digester house, 1,911 kg. steam. Wood contains 20 per cent moisture; the digesters of 200 cu. m. capacity are insulated and therefore the loss by radiation is very small; the temperature of the wood is 0° C.; temperature of the acid is 40° C.

Calories Required

For heating the wood from 0° to 135° C., 1,465,000.
For heating the moisture of the wood from 0° to 135° C., 1,052,000.
For heating 129 cu. m. of acid from 40° to 135° C., 12,250,000.
For chemical reaction, 985,000.
Heat in gases relieved, 600,000.
Total amount of heat needed per ton pulp, 996,000.
1 kg. steam equals about 520 cal.
The result is about 1.9 lb. steam per lb. air dry pulp for cooking.

If there were not used the warm acid from another digester (compare explanation of Figure 3) the consumption of steam would be about 20 per cent above this.

4. Indirect cooked pulp of another Swedish mill:

Per long ton air dry (90 per cent) pulp were calculated 8 cu. m. of acid which came from the tower at 10° C., the temperature to be raised by gases from the relief valves of the digesters to 40° C. The wood contained 35 per cent moisture, the temperature being 0° C. The maximum temperature of the digester contents was 135° C. The 8 cu. m. of acid required 320,000 cal., 2,130 kg. steam (5 kg. per cm.²) required 1,405,000 cal., giving a total of 1,725,000 cal. Of this 240,000 cal. were used for raising the temperature of the acid; 90,000 cal. were lost in the coolers; 605,000 cal. were lost in 5.5 cu. m. of liquor which was blown off; 385,000 cal. were lost in 3.5 cu. m. of liquor which was washed out; 55,000 cal. were lost by the pulp; and 350,000 cal. were lost by radiation, leakage, etc.

This mill used about 2.1 lb. steam per lb. air dry (88 per cent) pulp for cooking.

There was no hot acid taken from other digesters.

5. Conditions same as 4, only a part of the acid, 1.5 cu. m., was taken from another digester and only 6.5 cu. m. fresh acid was used. Figures per long ton air dry pulp.

6.5 cu. m. acid, 40° C contain.....	260,000 cal.
1.5 cu. m. acid, 130° C. contain.....	195,000 cal.
Total	1,685,000 cal.

195,000 cal. used for heating 6.5 cu. m. acid from 10° to 40° C.; 95,000 cal. were lost in the coolers; 495,000 cal. were lost in 3.5 cu. m. of waste liquor; 330,000 cal. were lost in 3.0 cu. m. of waste liquor; 195,000 cal. used by passing 1.5 cu. m. hot acid into the next digester; 55,000 cal. were lost by the pulp; 320,000 cal. were lost by radiation, leakage, etc.

1.8 lb. steam per lb. air dry pulp used for cooking.

Comparing figures of 3, 4 and 5 we see that these figures based upon trials in different Scandinavian mills are about the same. I am justified, therefore, in saying that a good working Scandinavian sulphite mill does not need more than 1.8 to 2.0 lb. of steam for cooking 1 lb. of strong sulphite.

The quality of the pulp is excellent. This is generally admitted. The consumption of chemicals per unit of pulp produced is lower than in most American mills. The only objection which could be raised against the process seems to be more labor and less production per digester in comparison with quick cooked American pulp. Now I wonder whether American results ever were compared with ours. I do not know such publications therefore I will give figures myself.

European mills can get out about 90 kg. air dry pulp per cubic meter. This means about 200 lb. per 35.3 cu. ft. or 5.66 lb. air dry pulp per cubic foot of digester capacity An American digester, 19 ton capacity, holds about 9,200 cu ft. The output per cubic foot content equals 4.13 lb. A 16 ft. diameter, 50 ft. high digester, contains about 7,000 cu. ft. and yields about 14.4 tons of pulp. This means about 4.1 lb. per cubic foot. European mills get out about one-third more good strong sulphite from the same digester than do American mills. It means practically that a good running European mill gets the same amount of pulp in making three cooks instead of four in America.

Now about manual labor employed in modern European mills: The last mill reconstructed by me was a Swedish mill making bleached sulphite. At full capacity the yearly production amounts to 10,000 to 12,000 tons. We employed in the wood yard and in the wood room 40 men; in the digester house 7 men; screen room, etc., 9 men; bleaching department 5 men; drying machines (pulp was dried) including transport of bales, 21 men; acid making, 5 men; steam generating and power station, 13 men; repair shop, masons, lead burner, workmen on the yard, etc., 42 men; total 145 men. Taking an average of 12,000 tons of unbleached pulp (11,000 tons bleached) and deducting 5 men from the bleaching department we have 140 men left. Out of this about 15 men could be done away with if the pulp was for our own use and not dried for export. In this case some 125 men and 290 working days of 8 hours equal about 290,000 hours of manual labor per year, which means that about 24½ hours of manual labor were needed for making one long ton of air dry pulp in a moderate sized mill.

We have learned on this side of the ocean from Americans the use of labor-saving devices. Therefore, our bill of manual labor has decreased greatly, but I am proud to say we are holding our own by utilizing raw materials more efficiently, and as an engineer, I believe it is the duty of technical men to get out as much as possible of the slumbering energies of dead materials. It is like putting life into it. It is vitalization as waste is death.

MICROSCOPICAL EXAMINATION TO DETERMINE FIBER COMPOSITION*

By H. N. Lee

This report is to be considered as only preliminary because sufficient analyses have not been received to draw final conclusions.

Samples were prepared and submitted to twenty-eight investigators who stated that they were willing to co-operate in this work. Of these twenty-eight investigators only twelve have sent in final reports and these cover nearly all possible methods of analysis. The methods used and the results obtained are given in the following table:

Investigator No.	Method	Samples within 5 per cent correct	Samples within 10 per cent correct
7	Quickest	10	14
13	Quickest	6	11
5	Count	9	14
8	Quickest	8	10
10	Estimation	5	9
24	Gravatt	8	11
21	Spence	8	12
26	Spence	11	12
11	Estimation	10	15
19	Spence	3	6
4	Spence	12	12
4	Estimation	12	12
1	Estimation	6	7

No. 5 uses no weight factors.
No. 19 examined only 7 samples.
No. 1 examined only 8 samples.

From the reports received it appears that equally accurate results can be secured using any of the methods. The estimation methods show best results but also the poorest results. It may be tentatively concluded that estimation methods may be used with safety provided the operator is well trained and does sufficient work to keep in practice, but the count methods are best for occasional tests or where operators not thoroughly familiar with the estimation method are used.

It is hoped that sufficient analyses will be received so that a complete report with detailed criticisms and with recommendations for standard procedure may be submitted at the next meeting of TAPPI.

C. S. Gravatt wishes it to be stated that the method indicated by his name was not originally described by him.

A very interesting contribution has been made by E. A. Bergholtz of the American Telegraph & Telephone Company entitled "Microsopic Analysis of Paper Fibers." This paper will be considered by the committee in its complete report to be ready for the fall meeting.

John H. Graff of the Brown Company, has submitted a paper entitled "The Accuracy of Graff's Method of Fiber Analysis of Mixed Pulps." This work will also be considered by the committee.

*Presented at the Sectional Meeting on Testing at the annual convention of TAPPI, April 12, 1923.

M. L. Cramer Goes with Holyoke Supply Co.

[FROM OUR REGULAR CORRESPONDENT.]

Holyoke, Mass., May 12, 1923.—Martin L. Cramer, who recently resigned as purchasing agent for the American Writing Paper Company, has been elected treasurer and manager of the Holyoke Supply Company. The Holyoke Supply Company does a large and increasing business with mill concerns and required the services of a trained man like Mr. Cramer. It is understood that Mr. Cramer had three other offers under consideration. He has begun on his new duties at the company.

CURRENT PAPER TRADE LITERATURE

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Pulp and Paper Industry

Beater. O. Massart. Can. patent 225,312, Oct. 31, 1922. Same as Fr. patent 522,794. See *Pulp and Paper* 20, 818 (Sept. 21, 1922). *Paper Trade J.* 74, No. 18, 58, May 4, 1922.—A. P.-C.

Method of Beating and Mixing Paper Stocks. J. T. Murphy, E. J. Raney and J. L. Carey. Can. patent 226,527, Oct. 31, 1922. When paper is made from two different kinds of stock, one of which is present in much larger proportion than the second, the former is prepared in a (preferably continuous) beater, which discharges into a suitable chest (having about four times the capacity of the beater), from which it is sent to a second beater (either continuous or intermittent) where it is mixed with the other kind of stock.—A. P.-C.

Instrument for Measuring the Degree of Beating of Pulp. E. W. L. Skark. *Papierfabr.* 20, 845-852 (1922). Translation by I. Ginsberg in *Paper Trade J.* 75, No. 21, 53-55 (Nov. 23, 1922). See *Pulp and Paper* 20, 957 (Nov. 2, 1922); *Paper Trade J.* 75, No. 19, 56 (Nov. 9, 1922).—A. P.-C.

Three Roll Beater. E. and O. Massart. Fr. patent 522,794, Aug. 23, 1920. *Papier* 24, 453-455 (Oct. 1921); *Paper Trade J.* 75, No. 23, 49 (Dec. 7, 1922); *Pulp and Paper* 20, 818 (Sept. 21, 1922); *Paper Trade J.* 74, No. 18, 59 (May 4, 1922).—A. P.-C.

Pulp Disintegrating Machines for the Manufacture of Paper. Anon. *Wochbl. Papierfabr.* 54, 247-248 (Jan. 27, 1923). Descriptions of the Strobach, Rhabus, Huber and Schaarschmidt hollanders.—J. L. P.

Formation of Froth. *Wochbl. Papierfabr.* 53, 1321-1322 (122); *Paper Trade J.* 75, No. 11, 26 (Sept. 14, 1922). Outline of the main causes of froth formation and of the means for preventing it.—A. P.-C.

Refiner for the Manufacture of Paper. Robert J. Marx. Ger. patent 366,809. *Papierfabr.* 21, 58 (Jan. 28, 1923). Basaltic lava or a similar stone is used in the refiner.—J. L. P.

Bleaching

New Diaphragm Cells in the Electrolytic Soda Industry. Paul Fabre. *Chimie et Industrie* 8, 524-527 (1922). A brief discussion of cells of the Townsend and Allen-Moore type, showing their merits and demerits and the lines along which they could be improved; improvement of the asbestos diaphragms and of the graphite anodes. The author also briefly touches on the merits of the mercury cathode cell, the chief of which is elimination of the evaporation of the caustic liquor.—A. P.-C.

Digestion of Straw by the Steffen Process. T. E. Blasweiler. *Papierfabr.* 20, 1025-28; 1061-4; 1101-3 (1922). Description of a detailed test on the bleaching of straw by the Steffen process. It is concluded that this process compares favorably with the Oexmann and other processes commonly used for the same purpose.—I. G.

Sizing

Sizing of Paper. Ger. patent 363,668. *Wochbl. Papierfabr.* 54, 397 (Feb. 10, 1923). Neutral or basic aluminum chloride is used as a precipitant.—J. L. P.

Degree of Dissociation and Unsaponifiable Matter in Rosin Size. A. Haug. *Wochbl. Papierfabr.* 54, 313-315 (Feb. 3, 1923). The effects of small amounts of different salts of the alkali and alkaline-earth groups on solutions of sodium resinate, at different concentrations, were studied. Solutions of sodium resinate, containing less than 10 grams of rosin per liter, are precipitated by salts at approximately the concentration of 1 gram per liter. Calcium salts have a greater flocculation effect than sodium salts. The effect of hard water on the composition of rosin size is shown. (The concluding article of a series published under this title in *Wochbl. Papierfabr.* 53, 3935-3938 (Nov. 4, 1922); 54, 25-27 (Jan. 6, 1923); 54, 243-245 (Jan. 27, 1923).—J. L. P.

Simultaneous Coloring and Sizing of Paper Stock. Ger. patents 368,191 and 368,192. *Papierfabr.* 21, 81-82 (Feb. 11, 1923). The soluble or finely divided acids obtained by treating coal with nitric acid, or air and nitric acid, are added to the paper stock. Lake-forming salts or hydroxides are subsequently added to produce the corresponding lakes. The second patent covers the use of all fossilized substances rich in humic acid in place of the coal. —J. L. P.

Fillers and Coating Materials

Paper Filler. U. S. patent 1,424,306. W. Hoskins. Jan. 8, 1922. Powdered calcium sulphate is washed with a solution of soap. Reaction takes place and the sulphate is coated with a superficial coating of an insoluble soap. Other substances, which are only slightly soluble in water and which possess the property of forming insoluble soaps, may also be used for this purpose. The resulting products may be used to good advantage as a size in the manufacture of writing papers.—I. G.

Loading and Filling Substances and Their Retention Properties. Carl C. Schneider. *Papier* 31, No. 11, 32-33 (Jan. 3, 1923). Practical observations on loading and filling materials.—A. P.-C.

Use of Corn Starch in Paper Making. Hans Wrede. *Papierfabr.* 20, 1429-1433 (Oct. 14, 1922); *Paper Ind.* 4, 1368-1371 (Jan. 1923); *Paper* 31, No. 12, 11-14 (Jan. 10, 1923). A general description of the methods of using starch and of its advantages in the following cases: For sizing writing and printing papers, as a filler, for surface sizing, for art printing papers, for coating art papers (along with casein), and as an adhesive in the manufacture of pasteboard.—A. P.-C.

Production of White or Variegated Shaded Paper or Board. Ger. patent 359,588. Addition to Ger. patent 295,565. *Wochbl.* starch products are used in the process as binding materials after being subjected to a very intimate mixing.—J. L. P.

Production of Fancy Figured Paper. Albrecht Blomberg. Ger. patent 359,588. Addition to Ger. patent 295,565. *Wochbl. Papierfabr.* 54, 172 (Jan. 20, 1923). A covering substance as wax, rosin, etc., is applied to the sheet, the color is then pressed in and, after drying, the covering substance is removed by a solvent or mechanically.—J. L. P.

Dyeing

The Coloring of Paper Stock With Color Lakes. Emil Heuser and Hans G. Behr. *Papierfabr.* 21, 1-6 (Jan. 7, 1923). The absorption of acid dyes is approximately the same for loaded paper stock as for stock free from loading material. Basic and substantive dyes, however, are more readily absorbed by loaded stock. With basic dyes, the color is most firmly fixed by magnesium silicate; next in order come calcium silicate and finally aluminum silicate. With substantive dyes the greatest absorption occurs with aluminum silicate; then, in order of their effectiveness, come calcium silicate and magnesium silicate. The silicates were prepared by adding to water glass either aluminum sulphate, calcium chloride, or magnesium sulphate. Acid silicates absorb basic

dyes the best. Substantive dyes can be used, however. In general, increased retention of the filler is effected by the choice of the proper dyestuff. Experimental data are given in detail.—J. L. P.

New Method of Measuring Colors. Ismar Ginsberg. *Paper* 31, No. 16, 7-10, 33 (Feb. 7, 1923). An explanation of Ostwald's color theory and of the manner in which it is used for classifying, identifying and measuring colors.—A. P.-C.

Production of Color Mixtures Containing Oils, Fats, or Waxes in an Unsaponified Condition for the Manufacture of Marbled or Glazed Paper and the Like. Ger. patent 367,805. *Papierfabr.* 21, 71 (Feb. 4, 1923). The color mixture containing oils, fats, or waxes and a color is subjected to a very intimate mixing process.

Drying

Economy of Steam for Drying Machines. K. L. Thunholm. *Svensk Pappers Tid.* 25, 7 (Apr. 15, 1922); 24 (April 15, 1921). By calculating the quantity of heat for the driers of four fourdrinier machines, two of which were provided with an installation for pre-warming and ventilation, the saving of heat, or gain in consumption of steam, amounted to about 39 per cent. The actual consumption of heat per Kg. of paper by the pair of machines provided with the installation was 1,400 calories, as compared with 2,400 calories during the period of the experiment before the heating system was installed, while the heat losses before and after the installation, were 1,560 and 560 calories. The gain in heat estimated for the two machines during the short period of the experiment was 1,300 calories; during the long period 1,600 calories, the difference being due to the lower outside temperature.—P. B.

Drying Roll for Paper Machines. H. H. Vaughan, assignor to Dominion Bridge Co., Ltd. Can. patent 225,946, Nov. 14, 1922. Drier felts are eliminated. The drier is provided with a set of perforations connected by pipes (one for each perforation) to a centrally located pipe which is connected to a suitable suction pump. The connections are such that any given perforation is connected to the suction immediately before it reaches the web on the drier, and the vacuum is relieved as soon as the perforation is no longer in contact with the paper.—A. P.-C.

Machine for Drying Blue-Print Paper. B. J. Hall. Cam patent 224,779, Oct. 17, 1922. The sensitized paper is dried by passing it over a suitably heated (hot water, steam, gas, or electricity) convex, smooth-surfaced body, the uncoated surface of the paper being in contact with the hot surface.—A. P.-C.

Physical Tests and Analytical Methods

Measuring the Effects of Temperature and Humidity on the Dimensions of Paper. Harold S. Davis. *Paper* 31, No. 12, 7-8, 10 (Jan. 10, 1923). A conditioning chamber was made from a glass tube 0.75 in. in diameter and 3 ft. long. Air conditioned by bubbling through sulphuric acid of known concentration at a given temperature was passed through the tube, which was surrounded by a jacket through which was circulated water at any desired temperature. Paper strips were suspended in the tube from adjustable supports at the top and were attached at the bottom to aluminum pointers so that a movement of 1 in. at the end of the pointers corresponded to a change of 0.1 per cent in the length of the paper. Tests carried out with various grades of paper (and illustrated by curves) gave the following results; With constant relative humidity the dimensions of the papers are substantially constant, even though the temperature varies. When the absolute humidity is decreased at a constant temperature the dimensions decrease, and vice versa, but the absolute humidity alone, without consideration of temperature, does not determine the dimensions of the paper. The rate at which the paper increases its dimensions with rising relative humidity is somewhat greater than the rate at which it decreases with falling relative humidity, but the difference is not very great. The rates at which the paper changes its dimensions in a moderate current of air are fairly rapid, being nearly complete in 5 to 10 minutes. The rates are increased with rise in temperature.—A. P.-C.

Paper Tests. M. O. Volovnik. *Bumazhnaya Promyshlenost* 1, No. 1, 103-110 (July and Aug., 1922). Comparative tests on papers made during 1921-1922 and those made in 1903 are given. The tests included breaking length, elongation, folding, fiber composition, ash, weight, thickness, sizing. The printing papers of 1921-1922 are found bulkier, and give higher tests for breaking length, elongation, folding, contain less ash and are in general mechanically superior to the papers of 1903. The writing papers of 1921-1922 also compare favorably with those of 1903.—M. C.

Factors Influencing the Properties of Wood Cellulose as Isolated by the Chlorination Method. Mark W. Bray and T. M. Andrews, Forest Products Laboratory, Madison, Wis. *Paper Trade J.* 76, No. 8, 47-49 (Feb. 22, 1923). The authors conclude from their experiments that: Overchlorination of cellulose increases the percentage of non-resistant cellulose at the expense of the resistant cellulose. The percentage of 17.5 per cent alkali soluble cellulose reprecipitated by acid in sound wood and pulp is very small compared with that which exists after chlorination. The action of some organisms of decay produces the same effects on the character of the cellulose as overchlorination. There is a definite relation existing between the percentage of non-resistant cellulose from spruce sulphite pulp and the copper number. The reducing power of non-resistant cellulose toward Fehling's solution is approximately ⅛ that of dextrose.—A. P.-C.

Device for Determining the Thickness of Cardboard Automatically. Ignaz Daubner. Ger. patent 362,493. *Wochbl. Papierfabr.* 54, 249 (Jan. 27, 1923).—J. L. P.

Work of the German Bureau for Testing Materials: Paper Testing. W. Herzberg. *Zellstoff u. Papier* 3, 17-20 (Jan., 1923). Several important investigations are reported briefly: Disintegration of typed documents in East Africa, identification of wood using sections of the same, proving falsified documents, spontaneous ignition of pulp, age of paper board, printing paper, paper from Adansonia bast fibers, moisture absorption of tissue paper during transport from Germany to South America, testing paper for fastness to light, detection of harmful metallic constituents in paper. —J. L. P.

Analytical Methods for the Control of Chemical Operations in Soda and Sulphate Pulp Mills. Rudolf Sieber. *Papierfabr.* 21, 89-94 (Feb. 18, 1923). An article consisting mostly of a review of recent improvements in analytical methods and written in anticipation of the report of the German Analysis Commission for Soda and Sulphate Mills. The following subjects are covered: Raw materials, cooking liquors, cooking process, pulp, lime sludge, and by-products as turpentine and methyl alcohol.—J. L. P.

The Relative Strength of Sheet-Machine and Hand-mold Sheets. E. Sutermeister. *Paper Ind.* 4, 1661-1662 (March, 1923). A comparison of results obtained in testing the strength of bleached and unbleached soda and sulphite, both beaten and unbeaten, when the sheets are prepared in a hand mold and when they are prepared by means of Wilen's sheet machine, from which the author draws the following conclusions: The sheet machine will give sheets of practically constant weight regardless of the time of beating, within reasonable limits; there is no possibility of calculating from the tests on hand mold sheets what those on machine made sheets would be. It is believed that much more reliable results can be obtained with a sheet machine, and it is recommended that wherever possible the use of the hand mold for quantitative work be abandoned.—A. P.-C.

Seventy-five Years of the Wood Pulp Industry. L. Moser. *Wochbl. Papierfabr.* 54, 101-103 (Jan. 13, 1923).—A brief account of the development of the mechanical wood pulp industry in Germany.—J. L. P.

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(*To be continued*)

Section of the
COST ASSOCIATION OF THE PAPER INDUSTRY
Affiliated with
THE AMERICAN PAPER AND PULP ASSOCIATION
Conducted by THOS. J. BURKE, C.A., Sec-Treas

COST CONVENTION, CLEVELAND, MAY 24 AND 25

The following program has been arranged for the Convention of the Cost Association, at Cleveland, Ohio.

THURSDAY, MAY 24

Morning Session

President C. A. Jasperson, Secretary, Nekoosa-Edwards Paper Company, "The Paper Industry and its Cost Problems."

Dr. Hugh P. Baker, Executive Secretary, American Paper and Pulp Association, "Fundamentals in the Paper Industry."

Alvin P. Simonds, President, Simonds Manufacturing Company, Pittsburgh, Pa., 'Economics for Executives."

Afternoon Session

Alexander Wall, Secretary, The Robert Morris Associates, "Financial Statements and their Analysis for Executives."

George E. Frazer, Member, American Institute of Accountants, Frazer & Torbet, Chicago, "The proper use of estimates in cost accounting."

C. Oliver Wellington, C. . A., "Federal Tax problems that particularly affect the paper industry."

FRIDAY, MAY 25

Morning Session

S. H. Childs, B. S., Chem. E., Scovell-Wellington Company, "Executive Control over Steam Costs"

Discussion.

E. P. Gleason, Chief Engineer, Nekoosa-Edwards Paper Company, "How we control our Steam Cost."

Discussion.

Committee on "Steam Costs" to be appointed.

FRIDAY AFTERNOON, MAY 25

This afternoon will be reserved for special meetings of the different groups in the industry. At these meetings the various cost estimate sheets which have been designed by the committees working thereon will be displayed and explained by the chairman of these committees.

The importance of these cost estimate sheets lies in the fact that they will be later sent out to manufacturers with suppositious orders and a request that they be filled in, showing conversion costs in these orders. From replies received a composite report will be compiled as has already been done in several groups, which will permit manufacturers to judge of their efficiency as compared with their competitors making the same products. The same cost estimate sheets must be used in order that these comparisons may be made on a properly comparable basis.

The Cost Association advocates that all pulp and paper manufacturers should base their selling prices on their costs. To say that selling prices are made by market conditions is futile. It means nothing but that some manufacturers must have money. If they have to take a loss to get it, they won't last long. Unfortunately, however, there are other manufacturers who could afford to wait until the "hard-up-crowd" had gone bankrupt, but do not do so. They are not sure about their costs, because they are "guessing" at them. They hear paper is being sold at a certain price—below the one they are quoting—and "guess" that if others can do it they can. When times are bad, it should not be necessary to cut out more than the profits. Why give away your capital?

The following groups have already arranged meetings: Writing and Cover, Book, Tissue, Wrapping and Pulp. Any other group desiring to have a special meeting can be accommodated by writing to this office. All mills, both members and non-members are invited to send representatives to this Convention. Reservations should be made early either through the Cost Association or sent direct to the Cleveland Hotel, Cleveland.

Cost Men to Meet at Kalamazoo May 21

[FROM OUR REGULAR CORRESPONDENT.]

KALAMAZOO, Mich., May 14, 1923.—The Kalamazoo Valley Division of the Cost Association of the Paper Industry will hold its next regular meeting on the evening of May 21 at the Park-American Hotel. This will be the last regular session for the season, although the Kalamazoo local has planned a fishing party for June 23, which will be devoted exclusively to angling and other picnic didoes.

The program for the May meeting will include a talk on "Cost System for Boxboard Mills," by E. F. Metcalf, of the Standard Paper Company; "Federal Capital Stock Tax," L. E. Ensing, and "Cost and Keeping to Date," Ralph Clark, of the Kalamazoo Vegetable Parchment Company.

Kalamazoo is planning to send a big delegation to the national convention of the Cost Association of the Paper Industry at Cleveland.

Resigns From Simplified Practice Division

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., May 16, 1923.—Samuel E. M. Crocker, formerly with the Crocker-Burbank Company, who has been connected with the Simplified Practice Division of the Department of Commerce since its organization some time ago, and who has had charge of the paper and other container standardization work, has resigned. His work is being taken over by Arthur E. Foote, who has been with the division for some time.

COST SECTION

FINDING STEAM LOSSES FROM STEAM COSTS

By Sterry Hunt Childs, B. S., Chemical Engineer[1]

Many interesting possibilities are involved in a papermill steam plant, and they are of individual and mutual concern to executives, engineers, and cost men. All of these are interested, for example, in the problem of ascertaining and reducing steam losses. The main responsibility, however, falls upon the cost men to present the facts in such a way that both the engineers and the executives may take action with the minimum of guesswork, and that even this minimum may be checked accurately by the results obtained.

In our first article[2] we outlined the several viewpoints from which steam costs are regarded, and told of some of the important factors which have an immediate effect upon the net profits of the plant. With this material in mind, we now purpose to show the means by which losses can be brought to light, and to discuss some points that are worthy of particular thought in connection with these losses. In going over the figures which follow, it is important to note that two main problems are involved, the first being the *generation*, and the second the *consumption* of steam; but the combination of the two, in their effect on each other and on the total cost of operation, is more important than either one alone.

As an illustration of what may be accomplished by a rather brief study of steam costs in any mill, we are including in this article the following data substantially as taken from a report made to a client. Of the six statements given, the first three are prepared as a part of the development of the burden or overhead charges for the plant as a whole, and the remaining three show the cost of operating under different conditions.

Should Be Checked Over Period of Time

When such statements are used, it should be remembered that the data are accurate only to the extent to which they have been checked up over a period of time. The accuracy does not affect the principle involved, or the conclusions which may be drawn from the premises; but it does affect the advisability of taking action to improve conditions at some expense, without more proof of these premises. The quickest way to get this proof is to make the assumptions as accurately as possible and then check them against actual results. Hence the preparation of the data shown on the statements is the first step to be taken, regardless of how soon it may be safe to rely on such data.

[1] With Scovell, Wellington & Co., accountants and engineers, New York City.

[2] Paper Trade Journal, March 29, 1923, p. 55.

	Schedule A — Steam Plant Burden Capacity Operation, 70 per cent Efficiency.	Schedule D — Steam Burden Actual Consumption 60 per cent Efficiency	Schedule E — Steam Burden Normal Consumption, 60 per cent Efficiency.	Schedule F — Steam Burden Normal Consumption, 70 per cent Efficiency.
Fixed Charges—				
Land—Coal storage	$25	$25	$25	$25
Buildings	5,200	5,200	5,200	5,200
Machinery and equipment	20,500	20,500	20,500	20,500
Boiler insurance	115	115	115	115
Total fixed charges	25,840	25,840	25,840	25,840
Inventory Charges—				
On coal inventory	750	750	750	750
Labor—				
Engineer (part)	1,500	1,500	1,500	1,500
Firemen	5,500	5,500	5,500	5,500
Helpers	4,500	4,500	4,500	4,500
Ash handlers	1,500	1,550	1,475	1,300
Coal handling	3,700	3,900	3,500	3,150
	16,700	16,950	16,475	15,950
Compensation insurance	334	339	329	319
Supplies—General	1,200	1,225	1,190	1,000
Coal at $6.50 net ton	*126,750	†138,125	‡117,000	§97,175
Repairs—				
Labor and burden	2,000	2,100	1,975	1,750
Materials	3,400	3,650	3,350	2,950
	5,400	5,750	5,325	4,700
Water	350	320	270	270
Electric Power	300	275	235	235
Steam at cost	**24,552	¶21,832	‡19,305	‖16,886
General manufacturing burden.	2,505	2,543	2,471	2,393
Total annual burden	$204,681	$213,949	$189,190	$165,518
Total water evaporated M lbs.	300,000	272,065	230,404	230,404
Cost per M lb	68.2c	78.6c	82.2c	71.8c
Memo—				
B. T. U. per lb. coal	11,500	11,500	11,500	11,500
Boiler pressure	125 lbs.	125 lbs.	125 lbs.	125 lbs.
Feed Water	180° F	180° F	180° F	180° F
Evaporation	7.7	6.4	6.4	7.7
M lbs. paper made	40,000	40,000	40,000	40,000
Lbs. coal per lb. paper	0,975	1,062	0.900	0.748
Steam cost per ton paper	$9.01	$9.61	$8.59	$7.43

*19,500 Tons. †21,250 Tons. ‡18,000 Tons. §14,950 Tons
**36,000 M lbs. ¶27,762 M lbs. ‡23,501 M lbs. ‖23,501 M lbs.

Schedule A

The first statement, Schedule A, concerns the steam plant alone. This shows the cost of operating at good efficiency 70 per cent, and at normal capacity of steam production, the latter being taken at 125 per cent of the boiler rating. The cost of steam

		Schedule B Steam consumption—Normal bases		Schedule C Steam consumption—Present basis	
Center	Production unit	Normal rate	Quantity M lbs. steam	Actual rate	Quantity M lbs. steam
Cooking, washing, size, etc		See note	19,600	See note	21,500
Paper machine engines (4)	27,200 machine hours	690 lbs. per hour	18,768	720 lbs. per hour	19,584
Drying:					
Machine No. 1	6,300 M lbs. paper	3.0 lbs. per lb.	18,900	3.83 lbs. per lb.	24,129
Machine No. 2	3,150 M lbs. paper	3.5 lbs. per lb.	11,025	5.40 lbs. per lb.	17,010
Machine No. 3	10,500 M lbs. paper	3.5 lbs. per lb.	36,750	4.37 lbs. per lb.	45,885
Machine No. 4	11,500 M lbs. paper	3.5 lbs. per lb.	40,250	4.13 lbs. per lb.	47,495
Machine No. 5	10,000 M lbs. paper	3.5 lbs. per lb.	35,000	4.21 lbs. per lb.	42,100
Heating—Arbitrary charges each period during the winter			26,600		26,600
Steam plant accessories and general losses—12 per cent of total evaporation			23,511		27,762
Total burden which should be earned by steam plant			230,404		
Steamplant—Unused capacity			69,596		
Total as per Schedule A			300,000		
Total burden probably to be earned by steam plant					272,065
			$157,198		$188,512
			47,483		
			$204,681		$21,832

*(at 78.6c.)

Note: These items are all figured in detail in actual practice, but are shown here in total to simplify the example.

per thousand pounds on this basis is 68.2 cents. If the actual cost of steam is more or less than this, it is due to conditions within the steam plant, or the total load on the entire mill, and is not the fault of any particular steam consuming unit by itself. Each consuming unit, therefore, should be charged at the rate of 68.2 cents per thousand pounds for the steam it uses.

Schedule B

Schedule B shows the amount of steam which should be consumed by the various units in order to produce the normal capacity production of paper or accessory products, such as size. This distribution should be based on the best information available from the studies and the experience tests of many plants. Such data is being improved, of course, both as to accuracy of information and as to efficiency of the operations considered, as more and more tests are made and the results made use of; but a good approximation is nearly as useful, although not so dependable as scientific proof, especially when it is going to be some years before much data is accumulated which can be called scientific.

If we check the total steam on Schedule A with that required by Schedule B, it is evident that unless other uses on an economical basis can be found for steam, the boilers under conditions of efficient consumption will be operating at about 75 per cent of their normal capacity. This underload is as much of a loss as any unused machine capacity; but whether it is worth while to try to reduce this loss depends upon its extent and upon the effect of changes on the business as a whole. This matter is one for the executives to decide from the facts as they find them, and the dollars and cents facts must come from the costs.

Schedule C

Our next calculation, Schedule C, is similar in form to Schedule B; but, instead of showing the steam consumption on a *normal* basis, it gives the steam *actually* consumed by the various units per unit of paper or accessory products, or per hour, etc. This calculation will be as accurate as is the measurement of the data upon which it is based. If the water to the boilers is metered, and the total checks with detailed tests of each consuming unit on the basis of a month's production, the calculation is as accurate as could be desired. If only the total water evaporated is known, the amount for each unit must be estimated; but these estimates can be checked by monthly results until they, too, are reasonably dependable. When neither the water nor the consumption is known, the former may be assumed from the amount of coal burned, and this total in turn checked against assumed consumption. These checks are simply to verify to some extent the first estimates in case the latter are thought to be too wide of the mark; if such is not the case, conclusions may be drawn at once from the calculations as first made.

A comparison of Schedule B with Schedule C indicates at once that excess steam is being used to the extent of about $31,314 more per year than should be needed. Even if the calculations made were only approximately correct, this amount is large enough to warrant a thorough study of the premises on which the calculations were based. We wish to lay particular emphasis on this matter of reliance upon approximations, because there is a rather prevalent idea that the losses involved in paper-mill steam plants are within the limits of probable error in such approximations, especially where no meters are available. Our experience has been quite the contrary, and we believe that the approximations are much less in error than the amount of losses ordinarily involved. The extent and the relative importance of such losses can be determined with entire satisfaction through a comparison of normal and actual steam consumption; and the amounts involved can then be checked in the course of several months, so that the need for more drastic action can be definitely determined before equipment is purchased or elaborate changes are made.

The three schedules given thus far are available as a result of any good cost system, and the data are all used (or should be used) in the cost accounting practice each period. The next three schedules are estimates of the probable expense under three different conditions, the differences in their totals indicating the losses involved in not attaining these conditions.

Schedule D

Schedule D takes the quantity of steam that would be consumed under conditions of normal paper production, etc., but at the current rate of steam consumption (as per Schedule C) and estimates what this would cost to generate under current efficiency of generation. This shows the actual cost of generating steam under conditions as they now are (assuming the mill is running at normal capacity). The unit cost is 78.6 cents per thousand pounds. It should be noted that although this is more than the cost under the more or less ideal conditions shown on Schedule A, it is certainly less than the unit cost would be if *consumption* were more efficient, owing to the fact that it approaches nearer to capacity operation of the steam plant than the latter condition would require. This point is mentioned to illustrate that fact that excessive consumption often means cheaper generation, so that the generation cost by itself is not a safe guide to rely upon.

Comparing Schedules A and D, we find that under present requirements for consumption, $11,988 per year more* is being spent to produce 19,697,000 pounds† less useful steam (worth approximately $13,400) than would be spent if the steam plant were run to capacity and at good efficiency.

Schedules E and F

Two further estimates are next in order. The first is Schedule E, which shows the cost of generating the steam needed at efficient *consumption* rates, but at the present efficiency of generation. The second, Schedule F, shows the cost of generating this same amount of steam at 70 per cent efficiency.

Summarizing the results determined by these several statements, we have the following:

Schedule		Useful steam	Cost of production
D	Present conditions	244,303M	$192,117
E	Normal consumption—Present efficiency of generation	206,903	169,885
F	Normal consumption—70 per cent efficiency of generation	206,903	148,632
A	Steam plant at capacity—70 per cent efficiency of generation	264,000	180,129
Savings by reducing consumption (D-E)			$22,232
Saving at reduced consumption by increasing efficiency of generation (E-F)			21,253
Total			$43,485
Additional steam capacity (A-F) 57,097M—Value at 68.2c per M		$38,940	
Additional cost to make it (A-F)		31,497	7,443
Total saving from: Reduced consumption, plus Increased efficiency, plus Utilizing capacity			$50,928

* ($213,949 less $21,832 = $192,117 compared with $204,681 less $24,552 = $180,129.)

† (300,000M less 36,000M = 264,000M compared with 272,065M less 27,762M = 244,303M).

Statement on Annual Basis

The foregoing statements are all made up on an annual basis for several reasons. First, it is better to have the whole story for the complete cycle of the seasons, in order to get a good check on generation and consumption; second, a more accurate total cost can thus be obtained; and third, the executives secure a clearer picture as to the effect on net profits. When checking the details, monthly comparisons are of coure necessary, and care should be taken to make due allowances for the fluctuations in expense and consumption, since taking one-twelfth of the annual cost does not give at all an accurate estimate of the cost for a particular month.

If one is to make up a set of schedules similar to those shown above, some comment will no doubt be helpful as to the relation between theory and practice for the individual items. It should

be stated, at the outset, that this matter is very much in the development stage as regards good standards of operation, and also to some extent as regards what factors are of sufficient importance to warrant study in the case of both the generation and the consumption of steam. As to the actual mechanics of the accounting, this also is a matter of development in the direction of the simplest, quickest, and least laborious means for getting at the facts, but the means here described have so far worked out very well in satisfying these requirements in actual practice.

Cost of Steam Generation

To take up first the cost of steam generation, it is not especially difficult to set up this cost accurately for the results expected in the way of total steam to be evaporated and the efficiency of doing it. Steam generation has been studied for many years in many different industries, and one is not confined to paper mill practice in getting at the fundamentals of operation.

For this reason the generation of steam is almost always handled more effectively than the consumption of it; in fact the excessive consumption is in itself an incentive to better operation of the boilers. There is, therefore, only one main reason for inefficiency of generation, and that is a lack of knowledge as to what the actual efficiency is. When the latter is known it is comparatively easy to make it what it ought to be; or if the low efficiency is due to mechanical reasons which one cannot afford to change, the facts are at least evident. When the efficiency is not known, it is as certain as anything can be without proof, that the rate is too low. For this reason it is safe to set 70 per cent as a standard of good operation (68 per cent to 76 per cent is about the degree of variation encountered in properly run steam plants); and a figure of from 45 per cent to 65 per cent may be assumed when no knowledge is available, the amount chosen depending on general conditions in the steam plant.

If a loss is suspected in the steam plant, or if a probable loss would run into a considerable sum of money, the efficiency of generation is a matter for steam engineers to check up by actual boiler tests. One thought in regard to such a test, however, may be mentioned—the efficiency of regular current operations will certainly be less than that under the test conditions, unless some mechanical factor reducing efficiency is accidentally present at the time of the test.

Coal Should Be Analyzed

Coal should be analyzed to get a reliable figure for B. T. U.'s, but in the absence of this a fairly good estimate may be made by taking the average value applicable to the kind of coal being used. That rates set up in this way, for expense, efficiency and heat units, are fairly accurate in spite of lack of definite proof under particular conditions, and they can really be depended on to tell whether definite proof is worth obtaining.

Data on steam consumption are not so well known or reliable as they are for generation, but one of the best ways to secure accuracy is to estimate them as near the facts as possible and then correct the results through increased knowledge. The amount of steam which should be required for various operations can usually be estimated on a theoretical basis without much difficulty, but up to the present writing the actual results in most paper mills are so very far in excess of the theoretical as to throw more doubt on the theory than on the practice, and tests of improved methods are just beginning to cast the suspicion in the other direction.

There are a few salient points where steam consumption in paper mills is most likely to be excessive. The first of these is in uncovered piping, with the resulting condensation losses; the second is in the drying operation; the third is in wasteful use of live steam to heat beater water, etc., and the fourth is in the failure to return the condensate from various points back to the boiler feed water.

General Condensation Losses

General condensation losses and boiler blow downs will run probably between 8 per cent and 20 per cent of the total steam generated, depending on the number of steam-driven boiler accessories, the length of piping throughout the mill, etc. Normal cost of steam produced at normal capacity operation of the boilers should include only a fair allowance for such general losses, but the distribution of the actual steam generated should include a percentage as near the facts as possible. In this connection, it should be noted (Schedule C) that steam used throughout the mill may be fairly charged only at the unit cost of efficiency made steam, whereas that consumed by the steam plant should be charged at its actual cost. If there are substantial losses from uncovered pipes, etc., which have no relation to the steam generation, these should be charged directly to profit and loss under this heading, for they are not an expense of generating steam, and they are not properly chargeable against other operations which use steam.

The same applies to condensate lost through failure to return it to the boilers, either because of engines exhausting directly to the atmosphere, or drips allowed to go to waste. Such losses are chargeable neither to the steam plant nor to other consuming units, unless the peculiar character of the unit makes this unavoidable. It is not always truthful or useful, therefore, to distribute all the expense of making steam to the directly consuming units.

Steam Engines Should Be Tested

Steam engines should be tested to find the amount of steam that passes through them for the power they are producing. Between 7 per cent and 10 per cent of this steam is condensed to produce the power, and the remainder goes into the exhaust mains. Engines vary between some 16 pounds of steam per horse power for a good sized tandem compound, up to possibly 60 pounds for a small and inefficient unit. For most paper machine engines a rate of between 28 pounds and 40 pounds may be set as the probable basis, and of this not more than 10 per cent should be charged as power. The steam consumption goes up with the back pressure, and an engine which takes 26 pounds at nearly zero back pressure will take about 40 pounds at 24 pounds back pressure.

Steam used for cooking, washing, size preparation, and heating of beater water can be calculated fairly closely by ascertaining the theoretical heat required to raise the quantity of water used to a certain temperature, and then adding a reasonable allowance for losses. The total for any particular item will not be so very large, and such an estimate is close enough unless the steam is simply turned on and left indefinitely. In such a case almost any amount can be used, but the excess is, of course, not a part of the operation considered, and would show up in the totals as an unaccounted for consumption.

Steam for heating has to be decidedly an estimate, but here also considerable data are available from many plants, and can be checked by Sunday operation. A rough figure would be around 200 pounds of steam per year per square foot of area heated.

Drying the Paper

Drying the paper is the most important steam consuming operation of all, and the one that will repay the most testing and checking. The most important single factor here is the amount of moisture that must be driven from the paper. Theoretically the percentage of dryness should be held within close limits for any particular grade of paper, usually between 28 per cent for news and 38 per cent for book papers. If the amount of moisture is known, the steam required may be figured at from 1.0 to 1.5 pounds per pound of water evaporated; the former figure assumes close to 100 per cent efficiency of heat transfer between the steam used and the water evaporated, and the latter about 70 per cent. A number of actual tests have shown from 1.1 to 1.25, and there seems to be no sound reason why an efficiency of better than 90 per cent should not be had with the ordinary run of papers

Agents
SUNDS AKTIEBOLAG
STRONG SULPHITE
indirect cooking

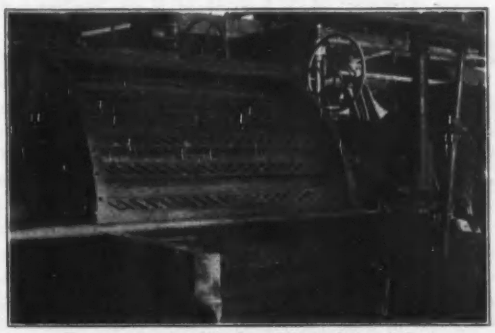
PERKINS-GOODWIN CO.
NEW YORK
PULP and PAPER

Agents A/S Toten Cellulosefabrik
BLEACHED SULPHITE
AGENTS GULSKOGEN
CELLULOSEFABRIK
EASY BLEACHING
SULPHITE

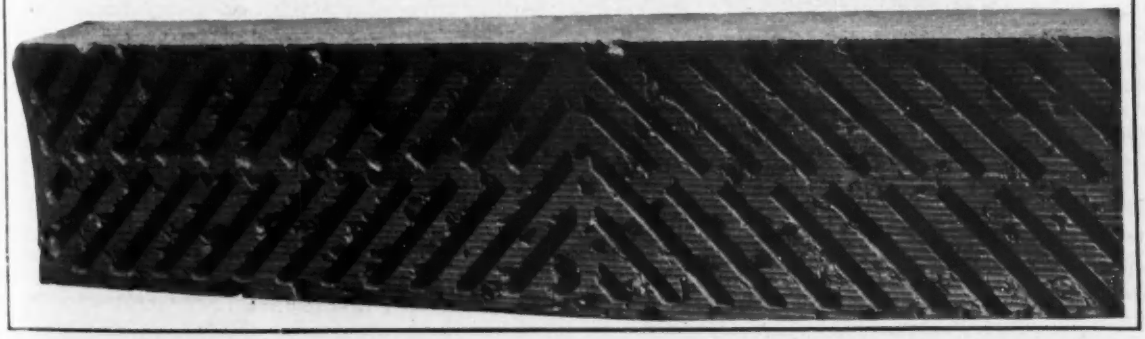
Conclusive Evidence on Beater Filling

THE GENERAL use of Helin Beater Filling in European mills, and the great number of mills which have installed it in this country are significant. The better quality of pulp from beaters thus equipped is obvious. The increase to production is surprising. Specific facts and figures await your request.

FIBRE MAKING PROCESSES, INC.
Chicago



The picture above shows Helin Beater Filling applied to a Hollander in an American mill.



where radiation losses do not need to be excessive and it is not especially difficult to drive the moisture through and out of the paper. It may be noted that the examples given in the first part of this article are decidedly on the safe side, for they assume the use of about 1.9 pounds of steam to evaporate a pound of water, or an efficiency of about 55 per cent.

When it comes to the distribution of steam actually being used in the dryers, the amounts found in practice are often so far in excess of not only good standards, but also reasonable possibility, that it is safe to say that the grade of formation of the paper being dried cannot account for the excess. Dryers filled with air are effectually insulated, and it takes a whole lot of steam going through, largely uncondensed, to dry at all. Dryers half full of water are also very poor heat conductors. Another source of loss is steam blowing through the traps or in some cases leaking around the packings.

In presenting the above, we have had in mind the importance of considering both steam generation and steam consumption as a whole, and also have kept in mind the three distinct viewpoints of the executive, the engineer, and the cost accountant. Probably, for this very reason, our discussion will seem complicated to each one of these. This situation, however, is the reason why more effective action has not been taken before, and why such remedies as outlined find a wide field of application at the present moment.

Not Much Work Involved

Although the preparation of the several statements suggested may appear quite a task to the uninitiated, they do not take very much work either to prepare or to revise, provided one knows, or can find out, the facts involved, as he should be able to do in his own plant. These statements become most useful, however, when made up for all sorts of probable or proposed conditions, as they afford an excellent picture for the executives before taking action, and an excellent study in comparison with the results after taking action. It is safe to say that, if such precautions had been taken beforehand, many paper mills would not have installed some of the unsuitable and unbalanced equipment they now have (one of the best examples being the use of condensing steam engines or turbines for power purposes while live steam has to be used for drying).

In connection with estimates of your own or outside engineers, therefore, the preparation of schedules such as those shown will either catch discrepancies or will completely justify both the engineers and the executives in going along the proposed lines, and this will mean a great deal to the peace of mind of both parties.

It will be very beneficial to the individual mills and the men concerned, and to the industry as a whole, if those who have the executive, engineering, and accounting responsibilities of the mills in charge, will get together on this subject of steam costs and try to obtain a clear and useful picture of the facts. This is desirable because the steam plant and savings connected therewith are important, and because the steam plant affords an excellent meeting-ground on which the heads of the plant can get to know each other and their mutual responsibilities.

Steam plants are unique in their application to many industries, and at the same time are sufficiently self-contained so that one can study them thoroughly without having to make allowance for many variables in connection with the operation of the plant, as one must do with most other departments.

An awakening of interest in such a problem as this will react upon the industry also through the incentive to make use of the technical and cost associations for the exchange of information. The more thoroughly such associations are participated in, the more benefit accrues to each member, and soon the information each once receives far exceeds the value of what any one alone can give.

Ohio Arranges Paper Making Course

E. L. Heusch, supervisor, Trades and Industries Division of the Ohio State Board of Education, Columbus, Ohio, announces that arrangements have been completed for correspondence and class study in the manufacture of pulp and paper. The department has prepared the following circular on this subject which it is just sending out:

"Many thoughtful and ambitious persons connected with the Pulp and Paper Industry have been obliged to leave school at an early age; others did not appreciate the opportunities afforded them of mastering the fundamentals of an education; while still others have forgotten a considerable portion of what they learned and have no convenient facilities for refreshing their memories. To meet these situations a course in Mathematics and Science equivalent to these portions of a high-school curriculum have been prepared especially for the pulp and paper industry, as preparatory to the later study of the more practical subjects of technology and manufacturing.

"Instruction by correspondence, when properly organized, has been proved to be a great value to students who cannot attend classes under personal direction. Its organization requires that the course of instruction shall be prepared and administered with regard to practical difficulties encountered by a student not in personal contact with his teacher, and that students who enroll should give evidence of their qualifications to pursue such courses with success.

"Where several students living in one community are registered in the same course, it is possible for them to unite for mutual assistance and study. A correspondence course offers valuable means for the employment of spare time, and it is found that a person's interest and competency in his regular work is increased through the efforts he gives to correspondence study. Ordinarily the employers approve of the efforts made by workmen in their employ to continue their education either in a general way or for the specific purpose of preparing themselves to fill positions of greater responsibility.

"The instruction is based on the text material prepared by the joint vocational education committees of the Pulp and Paper Industry of the United States and Canada. The printed text is supplemented by such additional material and questions as necessary to make the instruction complete and adequate.

"The subjects included in Volume I are: Arithmetic, Elementary Applied Mathematics, How to Read Drawings, Elements of Physics, Mechanics and Hydraulics, Electricity and Chemistry. These subjects are divided into study papers of convenient size.

"A person desiring to take a course makes application on a blank provided by the division. If his statements satisfy the division as to his ability to pursue successfully a course named, he is enrolled.

"Once enrolled the student receives from the instructor the first lesson pamphlets. He then reads the general instructions; follows carefully the directions for study given on the special instruction sheets. When he has completed the study of a lesson he sends in his work so that it may be inspected and graded.

"The course consists of a number of assignments or lessons, about twenty in all. The expense of the course are: Text Book, $5.00 and stamps, stationery, etc."

"Certificates are granted to students whose average on the complete course is 75 per cent or over."

Daniel Walsh Goes with Parker, Young Co.

[FROM OUR REGULAR CORRESPONDENT.]

LINCOLN, N. H., May 14, 1923.—Daniel Walsh has been appointed superintendent of the mill here of the Parker, Young Company, succeeding L. L. La Duke, who is now with the Groveton Paper Company as general superintendent.

Felt Test—Lowest Cost per Ton

If you judge felt values, not by what you put into the equipment, but what you get out of it—then you will specify ORR 3 stripe Endless Felts for ORR felts will produce the lowest cost per ton. They "stand up" under severe usage. Orr durability is acknowledged everywhere. Their strength and long life are as dependable as their reliability and quality.

In the 32 grades of Felts and Jackets we can match your most exacting demands. Tell us the kind of paper you desire to make, and we will send you samples of felts that will economically serve you and help you to produce paper at lowest cost per ton.

THE ORR FELT & BLANKET COMPANY, Piqua, Ohio

QUALITY FELTS

The tradition on which New England Industry was founded, "Standard Products Always," is ever uppermost in the manufacture of our "QUALITY"

DRAPER FELTS

DRAPER FELTS are known for long and satisfactory service. DRAPER FELTS are made in all styles for all kinds and styles of papers. Let us help solve your Felt problems.

DRAPER BROS. COMPANY
Canton, Mass.
Woolen Manufacturers since 1856

1864 1922

"EXCELSIOR" FELTS

for every grade of

PULP AND PAPER

We continue to maintain at the top the quality of Excelsior Felts, as we have done since we, as pioneers, made the first endless paper machine felts manufactured in America.

Seamless felts for fast running.
Satin Style felts for finish.
Special felts to meet every condition.
Send us your felt problems.

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BULKLEY, DUNTON & COMPANY
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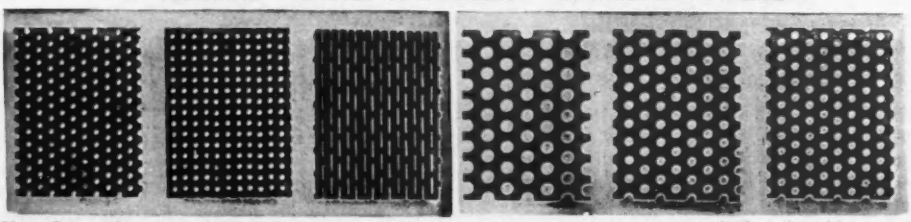
All sizes and shapes of Holes



All kinds and thicknesses of Metal

For Centrifugal and Rotary Screens, Drainer Bottoms, Filter Plates, Pulp Washers, etc.

The Harrington & King Perforating Company
618 No. Union Ave., Chicago, Ill., U. S. A. New York Office, 114 Liberty St.

New York Market Review

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, May 16, 1923.

Although dealers report that there has been a slight falling off in the demand for paper during the past week manufacturers say that they have not noticed such an inclination on the part of consumers, but on the contrary they filling contracts with the same regularity that has marked trading for several months past.

The slump which always comes with the summer seems to have delayed this year with the delay of the arrival of warm weather. Some paper men are optimistic enough to prophesy that there is not going to be any real falling off during the summer but that the market will remain firm and steady right through to autumn. Whether this is true or not there is little doubt that paper is in for as good a period as it has had at any time since the almost forgotten days that immediately followed the war.

Prices, the barometer of the market, have been remarkably level for some time and there is no prospect of any distinct movement in either direction.

News print has not changed any during the week. The demand is still sailing along on an even keel and manufacturers are of the opinion that nothing short of a hurricane can rock the boat. Prices remained the same and although spot news is not moving with any great rapidity contracts are coming in as frequently as can be expected at this time of year.

Fine papers of all kinds continued in good demand on contract. There was little bond on the open market, but the demand in that quarter was not great so that there was no tendency to throw the price list out of joint. Mills are said to be running at capacity production.

Book paper in all its grades continued to sell well. Representatives of both domestic and Canadian mills here report that they have contracts covering nearly the entire output of their mills. There was considerable book to be bought on the open market, but here too the demand was good and dealers said that it was moving well.

Tissue did not continue in quite so good demand this week but manufacturers and dealers are optimistic. They say that a slight falling off in the demand at this time means nothing and that anyway the decline is so slight as to be practically negligible. It is believed that tissue will be moving more briskly within a short time although no price change is expected.

Manila, fiber, jute and kraft papers all enjoyed a good week. Lots that were thrown on the open market were quickly picked up and contracts were being let to the satisfaction of the mills with no apparent tendency to diminish in quantity. Buyers seem to have pretty well used up stocks on hand and they are giving every evidence of coming into the market now. No change in price is anticipated.

The steady demand for board continued this week with prices unchanged. Manufacturers seem to have succeeded in stabilizing this product and the effect of the stabilization has communicated itself to all grades. It is believed that board will remain at about the same price for some months.

Mechanical Pulp

Groundwood remained in very good demand during the month and the grinding mills report that they are running at top speed. News print manufacturers are making a steady call for contract shipments and there is little of this sort of pulp finding its way into the open market.

Chemical Pulp

The situation in chemical pulp is now considerably easier than it has been for some time, but there are still very few odd lots finding their way to the spot market. In both the foreign and domestic grades the bulk of the present day business is on contract, some of which are being made for a long time ahead. It is believed that manufacturers and importers will make an effort to keep prices just about where they now are and that they will resist any effort to bring about a radical change.

Waste Paper

The better grades of waste paper are continuing in fair demand while there has been a slight shading off in some of the lower grades. Dealers say that on the whole business is very good although there are a few parts of their market that they believe might stiffen up somewhat. The board mills are coming in fairly heavily but no great changes in price are expected.

Rags

Rags, both in the imported and domestic varieties, were off this week. Importations have fallen off a little and the prices on all grades have weakened. This is particularly true of the lower grades. Dealers do not believe that the situation will remain the same for much longer than it has. They prophesy that things will pick up in this market within a short time.

Old Rope and Bagging

Old rope and bagging were both in poor demand during the week and paper mills did not seem to care much for either one of these commodities. Prices kept nominally the same, however, although it was said that revisions would be made for large orders.

Twine

Conditions in the twin market remained practically the same during the week. Prices were firm and the demand fairly good. Dealers say they are expecting that this year will be one of the best they have had.

Finland's Paper and Pulp Exports

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., May 14, 1923.—Exports of pulp and paper from Finland during the year 1922 amounted to 432,213 metric tons valued at 1,304,443,000 Finnish marks, an increase in quantity of 128,609 metric tons and in value of 248,721,000 Finnish marks over 1921 exports, according to a report received by the Department of Commerce.

Pulp shipments, which totaled 235,463 metric tons, consisted largely of sulphite, shipments of this product reaching 125,061 metric tons, while shipments of mechanical pulp and sulphate amounted to only 51,517 and 58,885 metric tons, respectively. Exports of news print, which is the largest single item, both from the standpoint of quantity and value of product, increased from 93,896 metric tons valued at 428,658,000 Finnish marks in 1921 to 130,083 metric tons valued at 468,253,000 Finnish marks in 1922, and exports of wrapping paper during the same period increased from 17,528 metric tons to 30,618 metric tons, and of pasteboard from 12,536 to 24,690 metric tons. While paper and pulp exports, without exception, have increased during 1922 as compared with the previous year, the largest gains were made in chemical pulp, pasteboard and wrapping paper. The average price per ton during 1922 was somewhat lower than in 1921 but this decrease was probably offset to some extent by the rise of the Finnish mark in the latter part of 1922.

Wider Use for New Zealand Flax in Paper Making

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., May 16, 1923.—It is reported to the Paper Division of the Department of Commerce that owing to a discovery in the manufacture of high grade paper, it is now possible to eliminate the brown stain, which hitherto has confined the use of New Zealand flax to the making of wrapping paper and mill board, and opens up the prospect of utilizing this fiber in the manufacture of higher grades of paper.

Market Quotations

Paper Company Securities

New York Stock Exchange closing quotations May 15, 1923.

	BID	ASKED
American Writing Paper Company, pref.	20½	21
International Paper Company, com.	41¾	42¾
International Paper Company, pref., stamped	67¾	69½
Union Bag & Paper Corporation	72	72½

Paper

F. o. b. Mill.

Ledgers	11.00 @38.00
Bonds	9.00 @45.00
Writings—	
Extra Superfine	16.00 @35.00
Superfine	14.00 @30.00
Tub Sized	10.00 @15.00
Engine Sized	8.50 @11.00
News—f. o. b. Mill—	
Rolls, contract	3.80 @ 4.00
Rolls, transit	4.00 @ 4.25
Sheets	4.25 @ 4.50
Side Runs	3.50 @ 4.15
Book, Cased—f. o. b. Mill	
S. & S. C.	7.25 @ 9.00
M. F.	7.00 @ 8.75
Coated and Enamel	9.00 @14.00
Lithograph	9.00 @14.00
Tissues—f. o. b. Mill	
White No. 1	.85 @ —
White No. 2	.80 @ —
Colored	1.10 @ —
Anti-Tarnish	1.40 @ —
Kraft	.90 @ .95
Manila	.80 @ —
Kraft—f. o. b. Mill—	
No. 1 Domestic	7.00 @ 7.50
No. 2 Domestic	6.50 @ 7.00
Imported	6.50 @ 7.00
Screenings	3.25 @ 3.50
Manila—	
No. 1 Jute	8.50 @ 9.00
No. 2 Jute	7.75 @ 8.50
No. 1 Wood	4.75 @ 5.50
No. 2 Wood	4.00 @ 4.50
Butchers	4.25 @ 4.75
Fibre Papers—	
No. 1 Fibre	6.00 @ 6.25
No. 2 Fibre	5.25 @ 5.50
Common Bogus	3.50 @ —
Card Middies	4.00 @ 5.00
Boards—per ton—	
News	65.00 @68.00
Straw	62.00 @65.00
Chip	62.50 @64.50
Binders' Board	82.00 @85.00
Sgl. Mla.Ll. Chip	80.00 @85.00
Wood Pulp	75.00 @83.00
Container	80.00 @85.00
Wax Paper—	
Self Sealing White 28 and 30 lb. basis	11.00 @12.00
Waxed Tissue	1.56 @ 1.65
Glassine—	
Bleached, basis 25 lbs.	15.00 @16.00
Bleached, basis 20 lbs.	17.00 @18.00
Papermakers' Felts per ton—	
Dry	75.00 @85.00
Saturated	65.00 @75.00
Sheathing Paper, per ton—	
Rosin Sized (red and gray, 30 lbs. per 500 sq. ft.)	55.00 @65.00

Mechanical Pulp

(Ex-Dock)

No. 1 imported	40.00 @41.00

(F. o. b. Mill)

No. 1 Domestic	37.50 @40.00

Chemical Pulp

(Ex-Dock, Atlantic Ports.)

Sulphite (Imported)—	
Bleached	5.00 @ 5.25
Easy Bleaching	3.50 @ 3.75
No. 1 strong unbleached	3.30 @ 3.50
No. 2 Strong unbleached	2.85 @ 3.10
No. 1 Kraft	3.25 @ 3.40
Sulphate—	
Bleached	4.00 @ 4.25

(F. o. b. Pulp Mill.)

Sulphite (Domestic)—	
Bleached	4.50 @ 5.00
Strong unbl'chd	3.00 @ 3.25
Easy Bleaching Sulphite	3.25 @ 3.50
News Sulphite	3.00 @ 3.25
Mitscherlich	3.20 @ 3.60
Kraft (Domestic)	3.05 @ 3.30
Soda Bleached	4.25 @ 4.50

Domestic Rags

New

Prices to Mill, f. o. b. N. Y.

Shirt Cuttings—	
New White, No. 1	13.00 @13.50
New White, No. 2	5.50 @ 6.00
Silesias, No. 1	7.00 @ 7.50
New Unbleached	10.50 @11.25
Washables	4.50 @ 5.00
Fancy	6.00 @ 6.50
Cotton—acording to Grades—	
Blue Overall	6.50 @ 7.50
New Blue	4.25 @ 5.00
New Black Soft	4.00 @ 4.75
New Light Seconds	2.00 @ 2.75
O. D. Khaki Cuttings	4.00 @ 4.50
Men's Corduroy	2.75 @ 3.50
New Canvas	6.25 @ 7.00
New Black Mixed	2.00 @ 2.75
Old White, No. 1—	
Repacked	5.00 @ 6.00
Miscellaneous	4.50 @ 5.50
White, No. 2—	
Repacked	3.00 @ 3.50
Miscellaneous	2.50 @ 3.00
St. Soiled, White	1.50 @ 2.00
Thirds and Blues—	
Repacked	2.00 @ 2.50
Miscellaneous	1.50 @ 2.00
Black Stockings	2.75 @ 3.00
Roofing Rags—	
Cloth Strippings	1.40 @ 1.50
No. 1	1.35 @ 1.45
No. 2	1.40 @ 1.50
No. 3	1.05 @ 1.15
No. 4	1.05 @ 1.10
No. 5A	1.00 @ 1.15

Foreign Rags

New Light Silesias	6.00 nominal
Light Flannelettes	6.75 nominal
Unbl'chd Cottons	7.50 nominal
New White Cuttings	9.50 nominal
New Light Oxfords	6.00 nominal
New Light Prints	4.50 nominal
New Mixed Cuttings	2.00 @ 2.50
New Dark Cuttings	1.90 @ 2.10
No. 1 White Linens	10.00 nominal
No. 2 White Linens	6.50 nominal
No. 3 White Linens	5.00 nominal
No. 4 White Linens	3.50 nominal
Old Extra Light Prints	2.00 nominal
Ord. Light Prints	1.75 nominal
Med. Light Prints	1.50 nominal
Dutch Blue Cottons	1.85 nominal
German Blue Cottons	1.65 nominal
Ger. Blue Linens	3.50 nominal
Checks and Blues	1.50 nominal
Dark Cottons	1.30 @ 1.35
Shoppery	1.00 @ 1.05
French Blues	1.75 @ 2.00

Bagging

Prices to Mill F. o. b. N. Y.

Gunny No. 1—	
Foreign	1.00 @ 1.10
Domestic	1.00 @ 1.10
Wool, Tares, light	1.45 @ 1.55
Wool, Tares, heavy	1.40 @ 1.50
Bright Bagging	1.05 @ 1.20
No. 1 Scrap	1.05 @ 1.20
Sound Bagging	.85 @ .95
Manila Rope—	
Foreign	6.25 @ 6.50
Domestic	6.50 @ 6.75
New Bu. Cut.	2.15 @ 2.25
Hessian Jute Threads—	
Foreign	5.75 @ 6.00
Domestic	2.10 @ 2.20
Mixed Strings	.90 @ 1.00

Twines

Cotton—(F. o. b. Mill)	
No. 1	.35 @ .37
No. 2	.31 @ .33
No. 3	.37 @ .39
India, No. 6 basis—	
Light	.20 @ .21
Dark	.19 @ .20
B. C., 18 basis	.41 @ .42
A. B. Italian, 18 Basis	.51 @ .61
Finished Jute—	
Dark, 18 basis	.29 @ .30
Light, 18 basis	.26 @ .27
Jute Wrapping, 3-6 Ply—	
No. 1	.23 @ .24
No. 2	.21 @ .22
Tube Rope—	
4-ply and larger	.15 @ .17
Fine Tube Yarn—	
5-ply and larger	.19 @ .21
4-ply	.20 @ .22
3-ply	.20 @ .22
Unfinished India—	
Basis	.16 @ .17
Paper Makers Twine	
Balls	.13 @ .15
Box Twine, 2-3 ply	.18 @ .19
Jute Rope	.17 @ .20
Amer. Hemp, 6	.33 @ .35
Sisal Hay Rope—	
No. 1 Basis	.15 @ .17
No. 2 Basis	.13 @ .15
Sisal Lath Yarn—	
No. 1	.14 @ .15
No. 2	.11 @ .13
Manila Rope	.18 @ .19

Old Waste Papers

(F. o. b. New York)

Shavings—	
Hard, White, No. 1	4.10 @ 4.25
Hard, White, No. 2	3.60 @ 3.90
Soft, White, No. 1	3.50 @ 3.60
Flat Stock—	
Stitchless	2.25 @ 2.35
Over Issue Mag.	2.25 @ 2.30
Solid Flat Book	2.15 @ 2.25
Crumpled No. 1	1.90 @ 2.00
Solid Book Ledger	2.80 @ 3.00
Ledger Stock	2.50 @ 2.55
New B. B. Chips	.85 @ 1.00
Manilas—	
New Env. Cut	2.45 @ 2.80
New Cut No. 1	2.00 @ 2.25
Extra No. 1 Old	1.80 @ 1.90
Print	1.45 @ 1.55
Container Board	1.20 @ 1.30
Bogus Wrapper	.95 @ 1.05
Old Krafts, machine compressed Bales	2.15 @ 2.25
News—	
No. 1 White News	2.10 @ 2.20
Strictly Overissue	1.20 @ 1.30
Strictly Folded	1.05 @ 1.10
No. 1 Mixed Paper	.90 @ 1.00
Common paper	.55 @ .65

CHICAGO

[FROM OUR REGULAR CORRESPONDENT.]

Paper

F. o. b. Mill

All Rag Bond	35 @ 40
No. 1 Rag Bond	30 @ 35
No. 2 Rag Bond	18 @ 25
Water Marked Sulphite	10 @ 14
Sulphite Bond	9 @ 12
Sulphite Ledger	11 @ 14
Superfine Writing	18 @ 24
No. 1 Fine Writing	14 @ 22
No. 2 Fine Writing	12 @ 20
No. 3 Fine Writing	9 @ 12
No. 1 M. F. Book	6½ @ 7
No. 1 S. & S. C. Book	7 @ 7¼
Coated Book	9 @ 10¼
Coated Label	9 @ 10
News—Rolls mill	4 @ 4¼
News—Sheets, mill	4¼ @ 4¾
No. 1 Manila	4¾ @ 6
No. 1 Fibre	5¼ @ 5¾
No. 2 Manila	4½ @ 5
Butchers' Manila	4 @ 4½
No. 1 Kraft	7 @ 7½
No. 2 Kraft	6½ @ 7
Wood Tag Boards	5 @ 5½
Screenings	5 @ 5½
Boards, per ton—	
Plain Chip	60.00 @65.00
Solid News	65.00 70.00
Manila Lined Chip	70.00 @72.50
Container Lined—	
85 Test	75.00 @80.00
100 Test	80.00 @85.00

Old Papers

F. o. b. Chicago

Shavings—	
No. 1 Hard White	3.75 @ 3.90
No. 1 Soft Shav.	3.60 @ 3.75
No. 1 Mixed	1,65 @ 1.75
No. 2 Mixed	1.50 @ 1.60
White Envel. Cuttings	3.60 @ 3.75
Ledgers and writings	2.00 @ 2.10
Solid Books	2.00 @ 2.10
No. 1 Books, Light	1.90 @ 2.00
Blanks	2.00 @ 2.15
Ex. No. 1 Manila	2.00 @ 2.15
Manila Envelope Cuttings	2.40 @ 2.50
No. 1 Manilas	1.50 @ 1.60
Folders News (over issue)	1.20 @ 1.25
Old Newspaper	1.15 @ 1.20
Mixed Papers	1.00 @ 1.10
Straw Clippings	1.00 @ 1.10
Binders Clippings	1.00 @ 1.10
Kraft	2.40 @ 2.50
New Kraft Cuts	2.60 @ 2.70
Reefing Stock, f. o. b Chicago, Net Cash—	
No. 1	37.00 @ —
No. 2	35.00 @ —
No. 3	33.00 @ —
No. 4	33.00 @ —

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Bonds	.10 @ .60
Ledgers	.15 @ .40
Writings—	
Superfine	.15 @ .20
Extra fine	.12 @ .22
Fine	.20 @ .30
Fine, No. 2	.20 @ .25
Fine, No. 3	.15 @ .20
Book, M. F.	.06 @ .11
Book, S. S. & C.	.08 @ .15
Book, Coated	.08 @ .15
Coated Lithograph	.10 @ .15
Label	.08 @ .15
News	.05 @ .07
No. 1 Jute Manila	.12 @ .13
Manila Sul., No. 1	.08 @ .10
Manila No. 2	.07½ @ .08
No. 2 Kraft	— @ .10
No. 1 Kraft	— @ .11
Common Bogus	.02½ @ .03
Straw Board	75.00 @85.00
News Board	65.00 @70.00
Chip Board	62.50 @67.00
Wood Pulp Board	1.25 @ 1.50
(Carload Lots)	
Binder Boards—	
Per ton	75.00 @80.00
Carload lots	75.00 @80.00
Tarred Felts—	
Regular	48.00 @50.00
Slaters	54.00 @56.00
Best Tarred, 1-ply (per roll)	1.35 @ 1.50
Best Tarred, 2-ply (per roll)	1.00 @ 1.15
Best Tarred, 3-ply	1.50 @ 1.65

Bagging

F. o. b. Phila.

Gunny No. 1—	
Foreign	1.25 @ —
Domestic	1.20 @ 1.25
Manila Rope	5.00 @ 6.25
Sisal Rope	.75 @ .80
Mixed Rope	.75 @ .80
Scrap Burlaps	1.00 @ 1.25
Wool Tares, heavy	2.50 @ 2.75
Mixed Strings	.75 @ .80
No. 1, New Lt. Burlap	1.75 @ 2.00
New Burlap Cuttings	1.75 @ 2.10

Old Papers

F. o. b. Phila.

Shavings—	
No. 1, Hard White	4.00 @ 4.25
No. 2, Hard White	3.50 @ 3.75
No. 1 Soft White	3.60 @ 3.75
No. 2 Soft White	2.00 @ 2.25

(Continued on page 62)

Imports and Exports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING MAY 12, 1923

SUMMARY

News Print.....603 rolls, 212 bls.
Cigarette Paper.....111 cs.
Hangings.....24 bls. 11 cs.
Wall Paper.....524 bls.
Filter Paper.....39 bls. 27 cs.
Drawing Paper.....3 cs.
Surface Coated Paper.....73 cs.
Coated Paper.....9 cs.
Tissue Paper.....10 cs.
Photo paper.....2 cs.
Litho Paper.....15 cs.
Printing Paper.....88 cs. 756 rolls.
Packing Paper.....111 rolls, 96 cs., 178 bls.
Wrapping Paper..13 cs., 98 bdls., 496 rolls, 58 bls.
Miscellaneous Paper.1,401 bls., 170 cs., 2,807 rolls.

CIGARETTE PAPER

Rose & Frank, Majestic, Havre, 11 cs.
P. J. Schweitzer, Belenland, Antwerp, 25 cs.
Rose & Frank, Paris, Havre, 45 cs.
Miguel, Costas & Miguel, Montserrat, Barcelona, 30 cs.

PAPER HANGINGS

W. H. S. Lloyd & Co., Menominee, London, 22 bls.
W. H. S. Lloyd & Co., by same, 11 cs.
A. C. Dodman, Jr., Inc., Celtic, Liverpool, 2 bls.

WALL PAPER

A. Murphy & Co., Celtic, Liverpool, 2 bls.
A. Murphy & Co., Hansa, Hamburg, 4 bls.
Nat'l City Bank, Pittsburgh, Bremen, 518 bls.

FILTER PAPER

J. Manheimer, Majestic, Bordeaux, 39 bls.
Scientific Materials Co., Seydlitz, Bremen, 3 cs.
H. Reeve Angel & Co., Berengaria, Liverpool, 1 cs.
H. Reeve Angel & Co., Menominee, London, 23 cs.

DRAWING PAPER

H. Reeve Angel & Co., Menominee, London, 3 cs.

SURFACE COATED PAPER

Gevaert Co. of America, Belgenland, Antwerp, 73 cs.

COATED PAPER

M. G. Lange, Geo. Washington, Bremen, 9 cs.

TISSUE PAPER

F. C. Strype, Celtic, Liverpool, 6 cs.
Meadows, Wye & Co., by same, 4 cs.

PHOTO PAPER

J. J. Gavin, Carmania, Liverpool, 2 cs.

LITHO PAPER

Ault & Wiborg, W. Penn, Hongkong, 15 cs.

NEWS PRINT

Parsons & Whittemore, Seydlitz, Bremen, 603 rolls.
Chemical Nat'l Bank, by same, 212 bls.

PRINTING PAPER

Bulkley, Dunton & Co., Seydlitz, Bremen, 186 rolls.
Chemical Nat'l Bank, by same, 398 rolls.
M. O'Meara Co., Belgenland, Antwerp, 172 rolls.
F. B. Vandegrift & Co., Hansa, Hamburg, 61 cs.
B. F. Drakenfeld & Co., Carmania, Liverpool, 21 cs.
Oxford University Press, by same, 6 cs.

PACKING PAPER

Vargo Trading Corp., Volendam, Rotterdam, 178 bls.
Birn & Wachenheim, by same, 96 cs.
Irving Bank, Col. Trust Co., Prsier, Antwerp, 72 rolls.
Republic Bag & Paper Co., Hansa, Hamburg, 39 rolls.

WRAPPING PAPER

Blauvelt, Wiley Paper Mfg. Co., Columbia, Glasgow, 98 bdls.
Arkell Safety Bag Co., Drothingholm, Gothenburg, 382 rolls.
M. D. Knowlton & Co., by same, 114 rolls.
De Nobili Cigar Co., D. Alighieri, Genoa, 33 bls.
Wilkinson Bros. & Co., Inc., Norefjord, Trondhjem, 25 bls.

PAPER

Birn & Wachenheim, Hansa, Hamburg, 100 bls.
P. H. Petry & Co., by same, 3 cs.
Republic Bag & Paper Co., by same, 1,853 rolls.
Republic Bag & Paper Co., by same, 392 bls.
Perry Ryer & Co., Columbia, Glasgow, 59 cs.
Chemical Nat'l Bank, Drothingholm, Gothenburg, 662 rolls.
Chemical Nat'l Bank, by same, 36 bls.
M. O'Meara Co., by same, 813 bls.
M. M. Cohen, by same, 60 bls.
M. M. Cohen, by same, 282 rolls.
C. K. MacAlpine & Co., by same, 91 rolls.
C. K. MacAlpine & Co., by same, 870 bdls.
Judson Freight Forwarding Co., Lafayette, Havre, 38 cs.
Independent Forwarding Co., by same, 9 cs.
Whiting & Patterson, by same, 3 cs.
Whiting & Patterson, Paris, Havre, 8 cs.
Birn & Wachenheim, by same, 13 cs.
Kronfeld, Saunders & Co., by same, 4 cs.
C. Steiner, Volendam, Rotterdam, 6 cs.
Calumet Mfg. & Importing Co., Geo. Washington, Bremen, 25 cs.
F. L. Kramer & Co., Pres. Polk, London, 3 cs.

RAGS, BAGGINGS

Castle & Overton, Vasconia, London, 150 bls. rags.
Castle & Overton, C. of Eureka, Genoa, 27 bls. rags.
Castle & Overton, Veendam, Rotterdam, 63 bls. rags.
Castle & Overton, Hektor, Barcelona, 155 bls. bagging.
Castle & Overton, Persier, Antwerp, 250 bls. bagging.
Castle & Overton, by same, 84 bls. rags.
E. J. Keller Co., Inc., by same, 86 bls. rags.
S. J. Keller Co., Inc., by same, 275 bls flax waste.
E. J. Keller Co., Inc., Hansa, Hamburg, 187 bls. rags.
E. J. Keller Co., Inc., Elmsport, Rotterdam, 62 bls. rags.
E. J. Keller Co., Inc., Volendam, Rotterdam, 1 bl. rags.
Waste Material Trading Corp., by same, 127 bls. rags.
Katzenstein & Keene, Inc., V. de Oran, Genoa, 108 bls. rags.
Royal Manfg. Co., Carmania, Liverpool, 19 bls. cotton waste.
Ayres, Oddy & Co., by same, 258 bls. cotton waste.
New England Waste Co., Italy Maru, Genoa, 572 bls. cotton waste.
Salomon Bros. & Co., Belgenland, Antwerp, 128 bls. flax waste.
E. Butterworth Co., Inc., Menominee, London, 100 bls. rags.
L. H. Abenheimer, Saxonia, Hamburg, 115 bls. rags.
Chemical Nat'l Bank, by same, 116 bls. rags.
Bank of America, Columbia, Glasgow, 44 bls. paper stock.
Guaranty Trust Co., Monte Grappa, Marseilles, 436 bls. rags.
Irving Bank, Col. Trust Co., by same, 19 bls. rags.
Goldman, Sachs & Co., Persier, Antwerp, 148 bls. rags.
Goldman, Sachs & Co., by same, 265 bls. bagging.
W. Schall & Co., by same, 41 bls. new cuttings.
W. Schall & Co., by same, 26 bls. rags.
Bankers Trust Co., by same, 67 bls. rags.

OLD ROPE

Katzenstein & Keene, Inc., V. de Oran, Genoa, 44 bales.
M. Wolfer, Calamares, Havana, 39 bales.
E. J. Keller Co., Inc., Galileo, Hull, 79 coils.
Brown Bros. & Co., Galileo, Antwerp, 147 coils.
Brown Bros. & Co., Volendam, Rotterdam, 121 coils.
Brown Bros. & Co., Menominee, London, 45 coils.
Brown Bros. & Co., by same, 66 bales.
Brown Bros. & Co., Vemosia, London, 90 coils.

WOOD PULP

R. F. Hammond, Inc., Drothingholm, Gothenburg, 1,250 bls. unbleached sulphite.
Castle & Overton, G. Washington, Bremen, 2563 bls., 58 tons wood pulp.
Castle & Overton, Pr. Harding, Bremen, 132 bls, 29 tons wood pulp.

WOOD FLOUR

Castle & Overton, Norefjord, Kristiania, 2,030 bags.

CASEIN

Bank of America, Vasconia, London, 80 bags.
Bank of the Manhattan Co., Hansa, Hamburg, 223 bags.
Otto Gerdan Co., Pr. Polk, London, 5 cases.
Atterbury Bros., Am. Legion, Buenos Aires, 274 bags.
Atterbury Bros., C. Planter, Australia, 1,017 bags.

PHILADELPHIA IMPORTS

WEEK ENDING MAY 12, 1923

Katzenstein & Keene, Inc., Skiensfjord, Naples, 418 bls. rags.
E. J. Keller Co., Inc., F. Bulow, Hamburg, 812 bls. rags.
E. J. Keller Co., Inc., Westerner, Antwerp, 188 bls. bagging.
E. J. Keller Co., Inc., Virginia, Copenhagen, 81 bls. rags.
E. J. Keller, Breedyk, Rotterdam, 130 bls. rags.
E. J. Keller Co., Inc., M. Mariner, Manchester, 111 bls. rags.
Castle & Overton, Vellavia, London, 294 bls. waste paper.
Castle & Overton, Meropia, Hamburg, 475 bls. rags.
Castle & Overton, Breedyk, Rotterdam, 87 bls. rags.
Castle & Overton, Westerner, Antwerp, 459 bls. rags.
Castle & Overton, Mahopac, Antwerp, 157 bls. rags.
Castle & Overton, by same, 239 bls. bagging.
Castle & Overton, V. de Oran, Havre, 861 bls. rags.
E. J. Keller Co., Inc., Breedyk, Rotterdam, 134 bls. old rope.

BOSTON IMPORTS

WEEK ENDING MAY 12, 1923

M. Gottesman & Co., Inc., Mexicano, Christiania, 1,500 bls wood pulp.
R. F. Hammond, Inc., by same, 500 bls., 100 tons wood pulp.
R. F. Hammond, Inc., Gustavsholm, Gothenburg, 1,000 bls, 200 tons wood pulp.
Castle & Overton, Huronian, Hamburg, 133 bls. wood pulp.
Castle & Overton, Vellania, London, 594 bls. waste paper.
Katzenstein & Keene, Inc., Dakarian, Liverpool, 83 bls. new cuttings.
T. M. Duche & Sons, Hesione, Buenos Aires, 834 bags Casein.

NEW ORLEANS IMPORTS

WEEK ENDING MAY 12, 1923

E. J. Keller Co., Inc., Cliffwood, Hamburg, 218 bls. bagging.
E. J. Keller Co., Inc., Coldbrook, Antwerp, 243 bls. bagging.
Castle & Overton, Novian, Glasgow, 380 bls. jute waste.

BALTIMORE IMPORTS

WEEK ENDING MAY 12, 1923

M. Gottesman & Co., Inc., Mexicano, Christiania, 1,000 bls. wood pulp.
R. F. Hammond, Inc., by same, 1,000 bls., 200 tons wood pulp.
R. F. Hammond, Inc., Virginia, Copenhagen, 1,800 bls. 300 tons wood pulp.

Stickle Compound Condensing System and Automatic Steam Control for Paper Machines

The folder we sent out to the mills "HOW TO DRY PAPER" showing our automatic steam control and our compound condensing system for draining the dryers and heating the air with the discharge from the dryers to condition the machine room, should interest you. In many mills we can guarantee a saving of 20% in steam consumed in drying the paper and conditioning the air for the machine room.

OPEN COIL HEATER & PURIFIER CO.
INDIANAPOLIS, IND.

BOSTON **PHILADELPHIA**

Clay
300 Tons daily

Entire production of a group of mines under one management insures uniformity in quality and minimum production costs.

Let us submit samples and quote you.

AMERICAN MADE FOR AMERICAN TRADE
THE MINER EDGAR CO
110 William Street New York

The B C Inc QUALITY PULPS

HAFSLUND NORWAY — **"HAFSLUND BEAR" Bleached Sulphite**

F. HAGA — **"FORSHAGA" Bleached Sulphite**

KRAFT HURUM NORWAY SPECIAL — **"HURUM SPECIAL" Extra Strong Kraft**

KOOS BAC — **"BAMBLE" Extra Strong Kraft**

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Whalen Sulphite Pulps

Made from the SITKA SPRUCE of BRITISH COLUMBIA. Noted for Fibre, Color and strength.

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Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, MAY 16, 1923.

Chemicals appeared to be a little slower during the week. There was a smaller demand for the spot varieties and the mills seemed to have made most of their contracts for the coming months. A slight decline in price was noticeable in some quarters of the market but dealers explain that warm weather always brings such a decline because of the difficulty experienced in keeping certain chemicals in high temperatures. This causes them to offer particularly attractive prices to buyers.

BLEACHING POWDER.—Although the demand for bleach has remained good during the week the price has fallen off about ten cents a hundred pounds. This is one of the commodities which does not store well in the summer and therefore an even lower quotation may be expected. It is now quoted at from 1.80 to 1.90 cents a pound.

BLANC FIXE.—Blanc fixe was not in such heavy call during the week but there was no change in prices which were revised upward a little two weeks ago. The pulp grade is selling at from $50 to $55 a ton and the dry is at about $87.

CHINA CLAY.—General conditions in the china clay market remain about the same with the demand good. Prices are firm and are not expected to show any change for some time to come. English grades are quoted at $15 to $23 a ton and the domestic at $14.75 to $16.50.

CAUSTIC SODA.—Caustic also remained at the same level during the week as it has been for the past month. With the price steady at 2.50 cents a pound dealers say that they do not see any possibility of price revision in the next few months.

CASEIN.—Last week marked the entry of several of European casein into the local market. This is the first time any real effort has been made to compete with the South American and the domestic grades. There was no sign of any price change, however, and quotations on the papermakers grade remained at from 21.50 to 23.50 cents a pound.

LIQUID CHLORINE.—Chlorine remained the same during the week with no change in demand save a slight falling off in some quarters. Dealers claim that this is not going to hurt their trade to any marked extent however and prices remained at 5.25 to 5.75 cents a pound.

ROSIN.—Naval stores are not in particularly strong demand at the present time and the price appears to have shaded off a little. Prices on the grades of interest to the paper mills are now at from 6.10 to 6.25 cents a pound.

SALTCAKE.—Standard saltcake showed no signs of changing during the week with a firm price of $25 to $27 a ton still quoted for contract and spot.

SATIN WHITE.—Satin white still follows blanc fixe in market conditions and keeps the same price ratio. The various grades are quoted at from 1.50 to 2.00 cents a pound.

SODA ASH.—Soda ash is not in quite as lusty demand as it has been in the past month, but its price showed no sign of change and remained firm at about 1.20 cents a pound in bags.

STARCH.—Starch is still in fairly good demand but there is no tendency for it to change either upward or downward in price. It is still quoted at from 2.80 to 3.10 cents a pound in the papermakers grades.

SULPHATE OF ALUMINA.—This commodity has not been in such good demand during the week. Mills seem to have good supplies on hand and the contract business is not quite so good as it was. The commercial grade is quoted at 1.40 to 1.50 cents a pound while the iron free is at 2.25 to 2.50.

SULPHUR.—Sulphur has not shown any marked tendency to change. The price is $17 to $19 a ton ex dock New York.

TALC.—Talc still remains at $15 to $18 a ton.

Market Quotations

(*Continued from page 59*)

No. 1 Mixed	1.60	@	1.75
No. 2 Mixed	1.25	@	1.50
Solid Ledger Stock	2.75	@	3.00
Writing Paper	2.50	@	2.75
No. 1 Books, heavy	2.25	@	2.50
No. 2 Books, light	1.40	@	1.50
No. 1 New Manila	2.75	@	3.00
No. 1 Old Manila	1.50	@	1.75
Container Manila	1.35	@	1.50
Old Kraft	2.25	@	2.50
Overissue News	1.50	@	1.60
Old Newspaper	1.20	@	1.25
No. 1 Mixed Paper	1.10	@	1.15
Common Paper	1.00	@	1.10
Straw Board, Chip	1.00	@	1.10
Binders Bd., Chip	1.00	@	1.10

Domestic Rags—New.
Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.12	@	.12¼
New White, No. 2	.07	@	
Silicias, No. 1	.07¼	@	.07½
New unbleached	.10	@	.11
Washables	.04½	@	
Fancy	.05¼	@	.05½
Cottons—according to grades—			
Blue Overall	.05½	@	.05¾
New Blue	.02¼	@	.02½
New Black Soft	.06¼	@	.06½
New Light Seconds	.02¼	@	.02½
Khaki Cuttings	.11	@	.04½
Corduroy	.03½	@	.04
New Canvass	.08¼	@	.08½
New Black Mixed	.04	@	
Old White, No. 1—			
Repacked	.06	@	.06¼
Miscellaneous	.04½	@	.04¾
White, No. 2—			
Repacked	.03½	@	.04
Miscellaneous	.03	@	.03¼
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.85	@	1.90
Black Stockings	2.75	@	3.00
Roofing Stock—			
No. 1	1.35	@	1.40
No. 2	1.25	@	1.30
No. 3	1.15	@	1.20
No. 4	1.15	@	1.20
No. 5A	1.10	@	
B			nominal
C			nominal

BOSTON

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Bonds	.09½	@	.63
Ledgers	.09½	@	.55
Writings	.08½	@	.42
Superfine	.16	@	.26
Fine	.15	@	.18
Books, S. & S. C.	.07¼	@	.12
Books, M. F.	.06¼	@	.09½
Books, coated	.09	@	.15
Label	.09	@	.13
News, sheets	4.75	@	6.00
News, rolls	4.50	@	5.75
Manilas—			
No. 1 Manila	$6.00	@	7.00
No. 1 Fiber	.06½	@	.07
No. 1 Jute	9.00	@	10.50
Kraft Wrapping	.07	@	
Common Bogus	3.50	@	3.85

Boards

(Per Ton Destination)

Chip	$62.50	@	65.00
News, Vat Lined	$65.00	@	70.00
Wood, Vat Lined	72.50	@	75.00
Filled News Board	65.00	@	
Solid News Board	75.00	@	80.00
S. Manila Chip	75.00	@	80.00
Pat. Coated	90.00	@	105.00

Old Papers

Shavings—			
No. 1 Hard White	4.25	@	4.40
No. 1 Soft White	3.50	@	3.75
No. 1 Mixed	.90	@	1.00
Ledgers & Writing	2.50	@	2.75
Solid Books	2.25	@	2.55
Blanks	1.50	@	1.65
No. 2 Light Books	1.60	@	1.75
Folded News, overissues	1.25	@	1.30
Gunny Bagging	1.45	@	1.55
Manila Rope	6.75	@	7.00
Common Paper	.90	@	.95
Old News	1.10	@	1.20
Old Kraft	1.90	@	2.00

TORONTO

[FROM OUR REGULAR CORRESPONDENT.]

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.11	@	.12½
Light tinted	.12	@	.13½
Dark Tinted	.13½	@	.15
Ledgers (sulphite)	—	@	.15
Writing	.09½	@	.12
News, f. o. b. Mills—			
Rolls (carloads)	3.75	@	—
Sheets (carloads)	—	@	4.50
Sheets (2 tons or over)	—	@	4.75
Book—			
No. 1 M. F. (carloads)	9.00	@	—
No. 2 M. F. (carloads)	8.00	@	—
No. 3 M. F. (carloads)	7.50	@	—
No. 1 S. C. (carloads)	9.50	@	—
No. 2 S. C. (carloads)	8.50	@	—
No. 1 Coated and litho	14.00	@	—
No. 2 Coated and litho	13.00	@	—
No. 3 Coated and litho	12.25	@	—
Coated and litho., colored	14.25	@	—
Wrapping—			
Grey	5.00	@	—
White Wrap	5.75	@	—
"B" Manila	6.00	@	—
No. 1 Manila	7.25	@	—
Fiber	7.25	@	—
Kraft, M. F.	8.00	@	—
M. G.	8.15	@	—

Pulp

(F. o. b. Mill)

Ground wood	$35.00	@	40.00
Sulphite easy bleaching	65.00	@	75.00
Sulphite news grade	55.00	@	60.00
Sulphite, bleached	90.00	@	100.00
Sulphate	65.00	@	70.00

Old Waste Papers

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.90	@	—
Soft White Book shavings	3.40	@	—
White Blk. News	2.10	@	—
Book and Ledger—			
Flat Magazine and Book Stock(old)	1.80	@	—
Light and Crumpled Book Stock	1.65	@	—
Ledgers and Writings	2.00	@	—
Solid Ledgers	2.00	@	—
Manilas—			
New Manila Cut	2.10	@	—
Printed Manilas	1.85	@	—
Kraft	2.50	@	—
News and Scrap—			
Strictly Overissue	1.30	@	—
Folded News	1.30	@	—
No. 1 Mixed Papers	1.10	@	—
Domestic Rags—			
Price to mills, f. o. b. Toronto	Per lb.		
No. 1 White shirt cuttings	.13	@	.13½
No. 2 White shirt cuttings	.07	@	.07¼
Fancy shirt cuttings	.06½	@	.06¾
No. 1 Old whites	.04½	@	.05
Third and blues	.02¾	@	.03
	Per cwt		
Black stockings	.03	@	—
Roofing stock:			
No. 1	—	@	—
No. 2	—	@	—
Roofing stock:			
Manila rope	.06½	@	.06¾
No. 2	1.55	@	—
Gunny bagging	.01¾	@	—